Attachment 31

2013 Bureau of EMS Status Report

Iowa Department of Public Health,
Gerd W. Clabaugh, MPA
Director

TABLE OF CONTENTS

Acknowledgments

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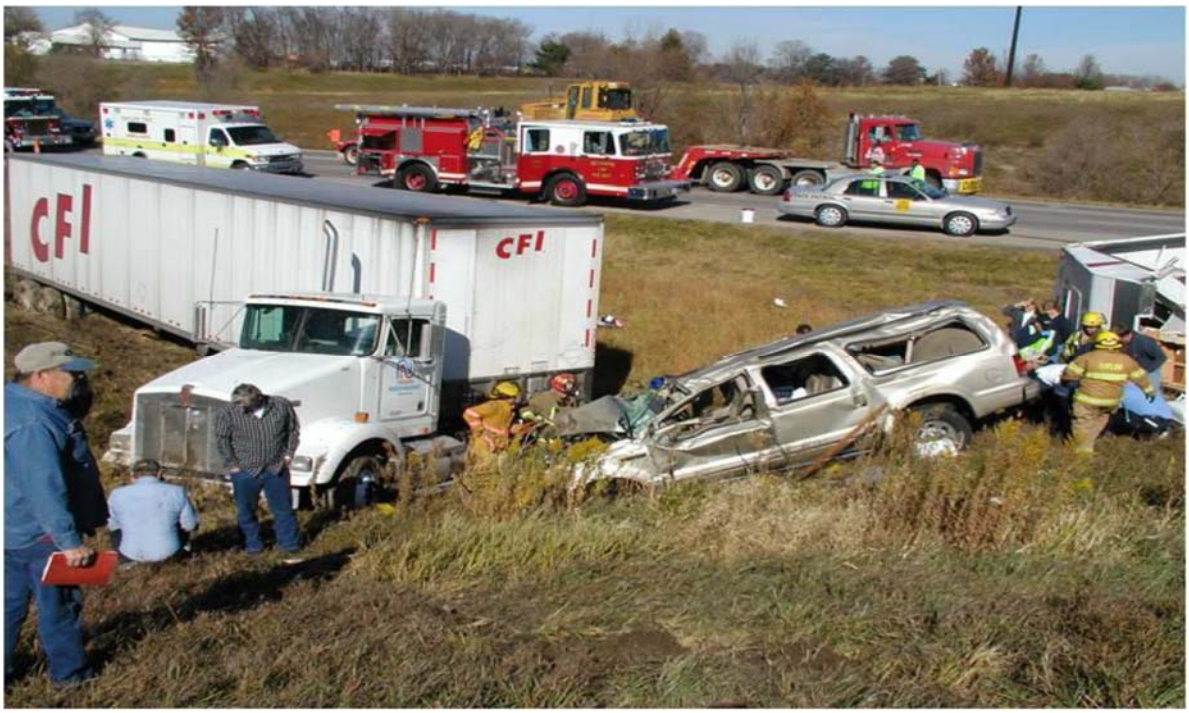
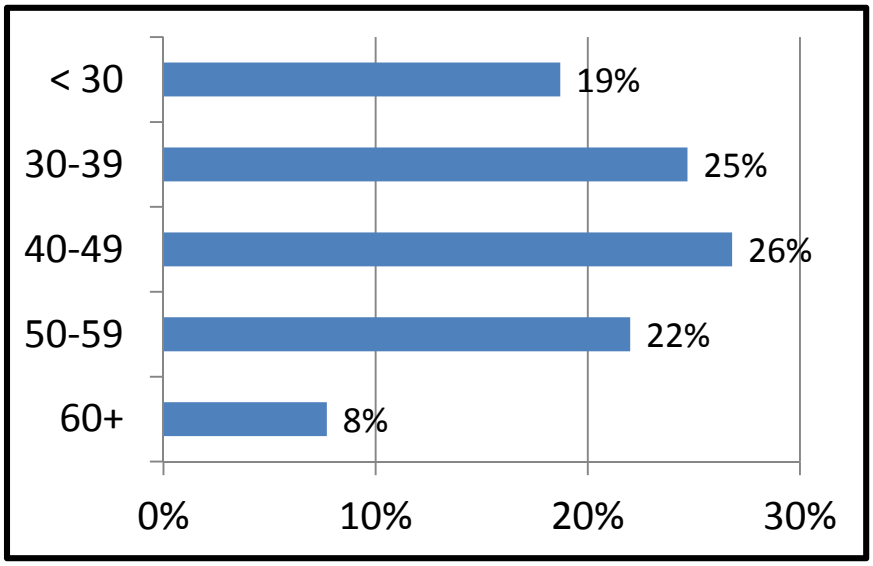
A Message from the Director



EMS Providers

Figure 1: Age range of providers



In 2013, 71% of the EMS providers were male and 29% were female. The EMS providers were relatively evenly distributed in age up to 60 years old.

In 2013, there were 11,524 certified providers in Iowa. While 62% were listed on only one service roster, there were some who were listed on more, including one individual who was listed on six service rosters.

Table 1: Number of providers by service roster

Number of Services	Number of Providers
1	7178
2	1223
3	194
4	33
5	6
6	1
Total	8635

Table 2: Number of registered nurses on service rosters

Year	Registered Nurses
2008	381
2010	495
2012	516
2013	562

An Iowa Registered Nurse (RN) may function as a member of an EMS service if they have equivalent training as approved by the physician medical director and the service. Since 2008, there has been a 48% increase in the total number of RNs on the service roster.

Table 3: The number of providers at the various certification levels for EMS providers

Level	Total
Advanced Emergency Medical Technician	135
Emergency Medical Responders	1145
EMS - Instructor	2
Emergency Medical Technician	5724
Emergency Medical Technician - Ambulance	1
Emergency Medical Technician - Basic	718
Emergency Medical Technician - Defibrillator	5
Emergency Medical Technician - Intermediate	628
Emergency Medical Technician - Paramedic	343
First Responder	213
First Responder - Defib	7
Paramedic	2194
Paramedic Specialist	409
Total	11524

In 2013, 56% of providers were certified at the EMT/EMT-Basic level and 23% at the Paramedic/Paramedic specialist level.

Table 4: Level transitions

Current Level	Transition Level	Date for Completion
First Responder	Emergency Medical Responder	September 30, 2013/2014*
EMT - Basic	Emergency Medical Technician	March 31, 2014/2015*
EMT - Intermediate	Advanced Emergency Medical Technician	March 31, 2016
EMT - Paramedic	Paramedic	March 31, 2018
Paramedic Specialist	Paramedic	March 31, 2014/2015*

The Bureau of EMS has developed programming to transition the current provider levels to the nationally identified scope of practice level. Transition started on August 1, 2011.

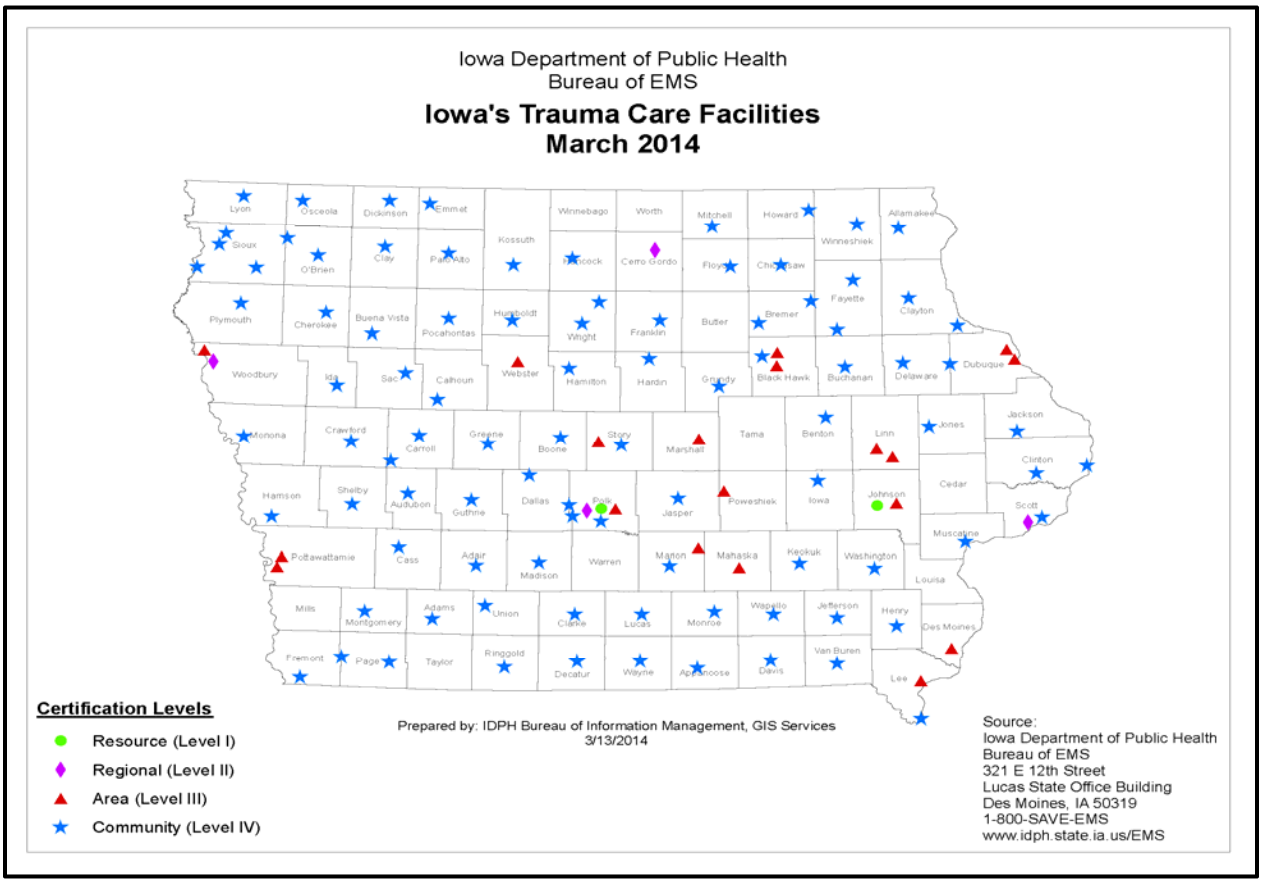
The Trauma System

Table 5: Number of Trauma Care Facilities by each level in 2013

Level	Number in State
Level I: Resource	2
Level II: Regional	4
Level III: Area	19
Level IV: Community	93

Trauma care facilities are. self-categorized into one of four levels by their availability of resources to provide trauma care. Level I and II facilities have the most resources to provide trauma care.

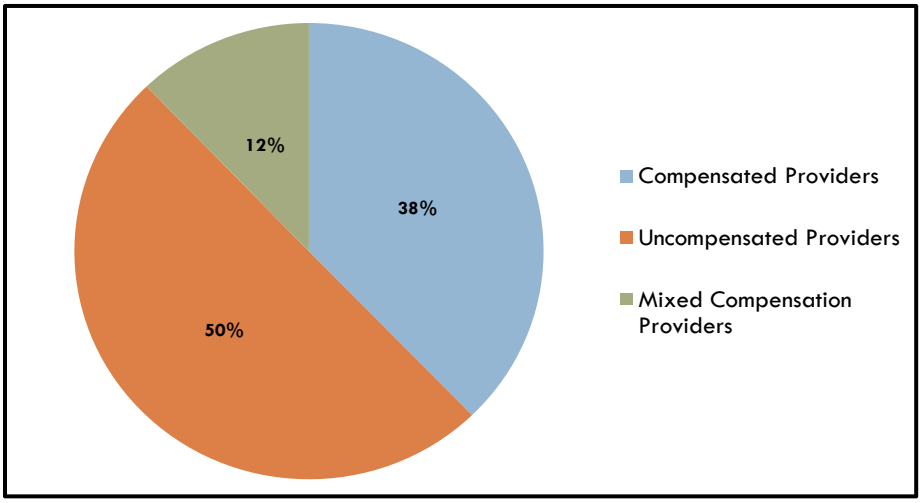
Figure 2: Locations of the trauma care facilities with level designation (2013)



In 2013, University of Iowa Hospitals and Clinics and Iowa Methodist Medical Center were the two Level I facilities in the state providing the greatest number of resources for care along with Level II facilities. Level II facilities are scattered throughout the state, but are generally near larger cities. The majority (79%) of facilities are categorized as a Level IV.

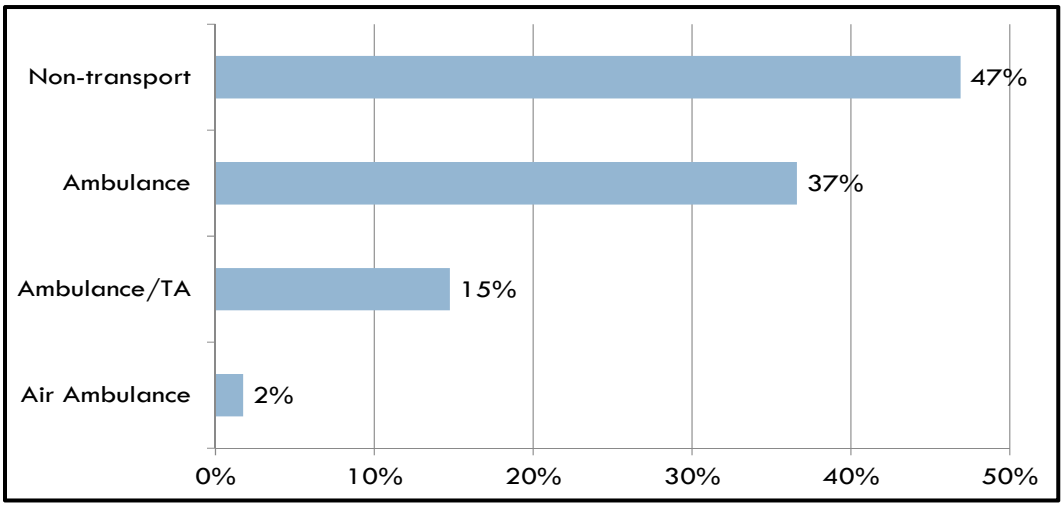
EMS Services

Figure 3: Service staff compensation



The majority (50%) of services are staffed by uncompensated providers.

Figure 4: Type of service provided by EMS



Nearly half of the authorized services in the state are non-transport. Programs that are unable to maintain 24/7/365 staffing are allowed to apply to provide non-transport coverage in addition to ambulance services. Ambulance/TA denotes those services that have a formal written transportation agreement with a neighboring ambulance service. There are 13 air ambulance services in the state.

Table 6: Results of service inspections by type of service

Service Type	Services with deficiencies	Services w/o deficiencies	Total
Air*	3	3	6
Ambulance	65	15	80
Ambulance/TA	31	1	32
Non-transport	101	13	114
Total	200	32	232

Of the inspections completed in 2013, 14% of the services had zero deficiencies.

Table 7: Number of deficiencies by type of service

# Deficiencies	Air	Ambulance	Ambulance/TA	Non-Transport	Total
1-5	2	37	13	37	89
6-10	1	15	8	22	46
11-15	0	6	6	14	26
16-20	0	5	1	18	24
21-25	0	2	3	9	14
26-30	0	0	0	0	0
31-35	0	0	0	1	1
Total	3	65	31	101	200

Of all services cited with deficiencies, 45% had 5 or fewer compared to 62% in 2012.

Love Our Kids

Table 8: The amount distributed to regions of the state through the "Love Our Kids" program

Year	NW	NC	NE	SW	SC	SE	Total
FY 2008	$1,500	$1,500	$1,500	$0	$0	$0	$4,500
FY 2009	$4,500	$4,465	$5,601	$0	$1,655	$2,711	$18,932
FY 2010	$5,991	$5,316	$5,140	$4,030	$0	$9,478	$29,955
FY 2011	$4,500	$1,500	$4,500	$4,500	$1,921	$5,220	$22,141
FY 2012	$10,500	$6,000	$1,500	$1,500	$3,000	$6,000	$28,500
FY 2013							

The "Love Our Kids" license plates generate the proceeds to fund community based childhood injury prevention and education programs throughout the state.

Table 9: The number of projects funded by "Love Our Kids" grants in 2012

Type of Project	Number of Projects
Farm Safety Ed/ Ag & ATV Injuries & Prevention	1
Safe Environment Education and Products	1
Safety Fair	2
Child Passenger Safety	4
Bike Helmets Education/ Safety on Wheels	4
Child Abuse	2
Distracted Driving	2
Impaired Driving	2
Bullying	1

The type of project most funded by the "Love Our Kids" grants in 2012 were those involving child passenger safety and bike helmet education.

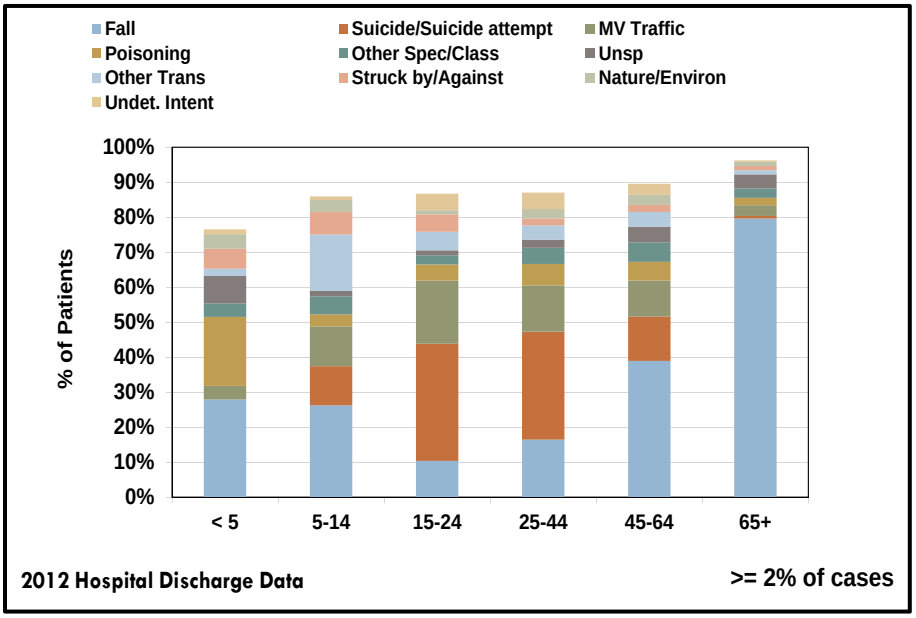
Table 10: The number of projects funded by “Love Our Kids” grants in 2013

Type of Project	Number of Projects
Bike Helmets Education	1
Bullying	1
Child Abuse/Shaken Baby	1
Child Passenger Safety	2
Concussion/Sports Safety	2
Pediatric Prevention Education for EMS	1
Farm Safety Ed/ Ag & ATV Injuries & Prevention	1
Poisoning Prevention	1
Safe Sleep Environment Education and Products	3

The type of project most funded by the “Love Our Kids” grants in 2013 involved safe sleep environment education and products.

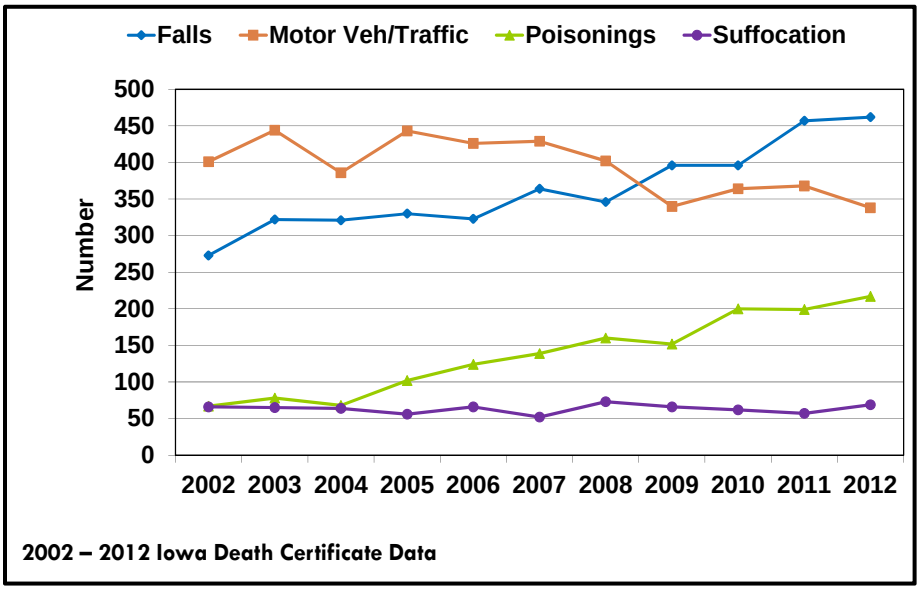
EMS Outcomes

Figure 5: The majority mechanisms of injury by age



Key mechanisms of injury varied with age. Falls were the primary type of injury for 45-64 year olds, and more so for those older than 65. For age groups 15-24 and 25-44 the dominant mechanism of injury was suicide/suicide attempt. In addition, poisonings and falls were the most prominent injury mechanisms for those less than 5.

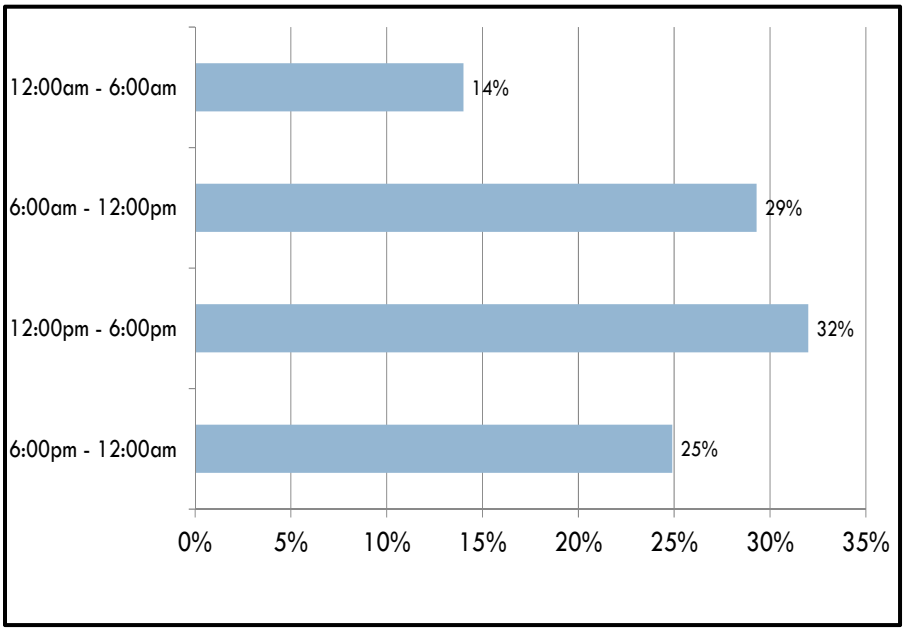
Figure 6: Causes of unintentional trauma related death



Trauma deaths due to falls, poisonings, and suffocation have increased, while those due to motor vehicle crashes declined in 2012. Trends in data can indicate where the trauma system response is working and where changes need to be made.

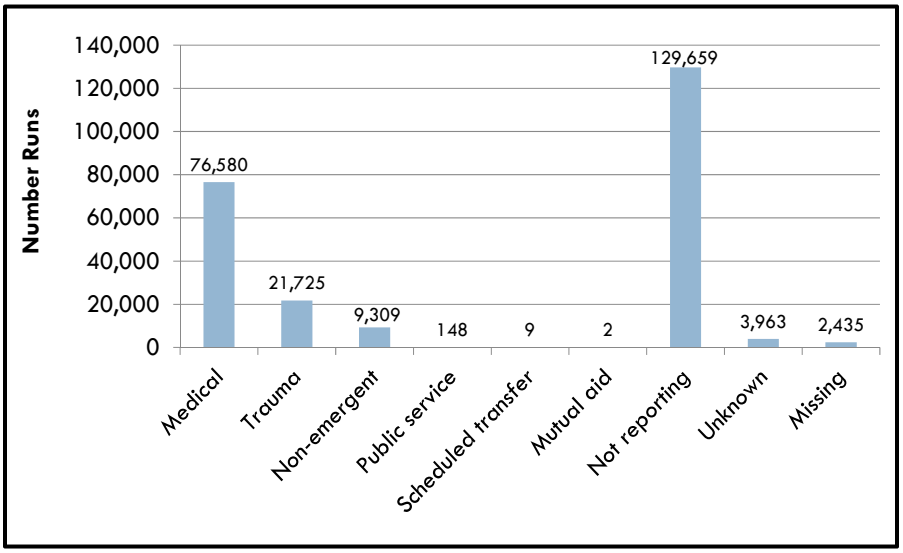
EMS Performance Measures

Figure 7. Number of calls per time range (all EMS runs)



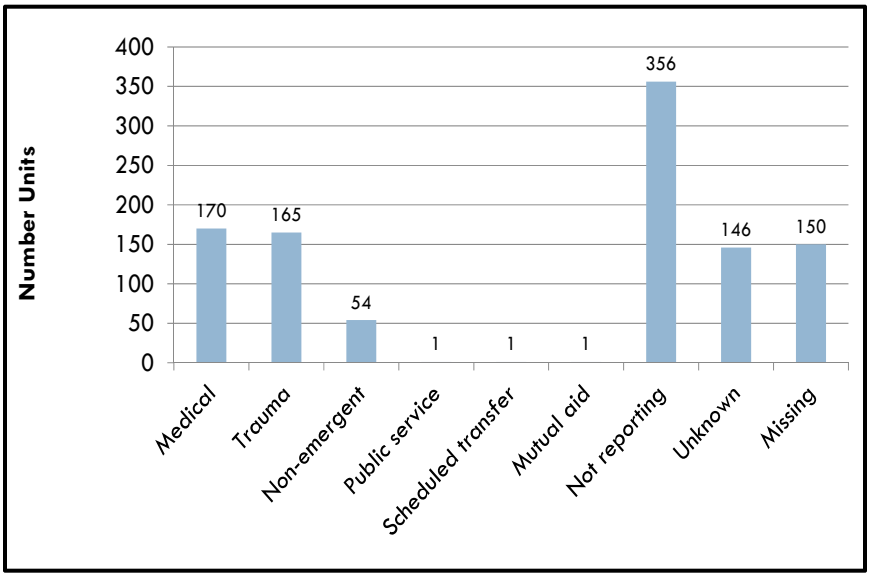
EMS calls were lower in the overnight hours yet increased as the day progressed, particularly during the noon to 6:00pm time period.

Figure 8. Number of EMS runs by type of incident (all EMS runs)



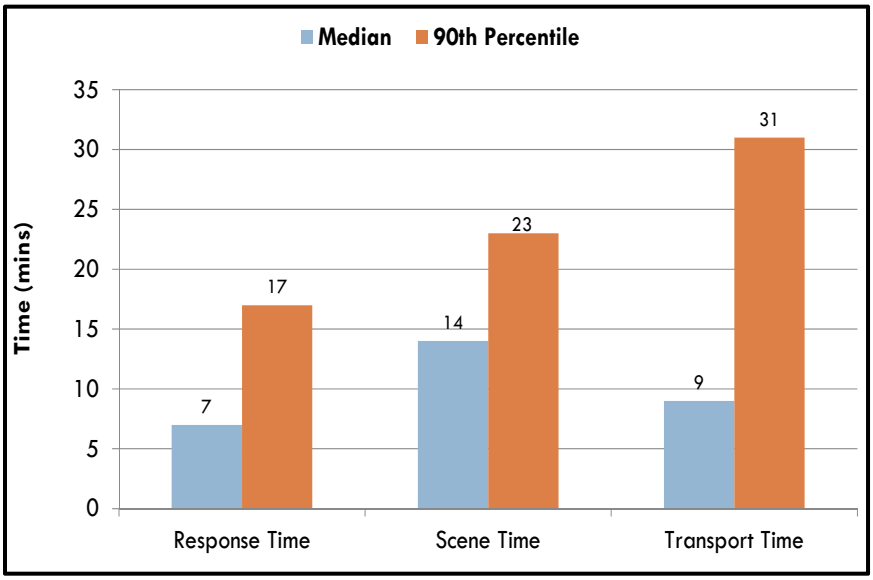
Of those agencies that reported an incident type, the majority were medical runs followed by trauma runs.

Figure 9. Number of EMS units by type of incident (all EMS runs)



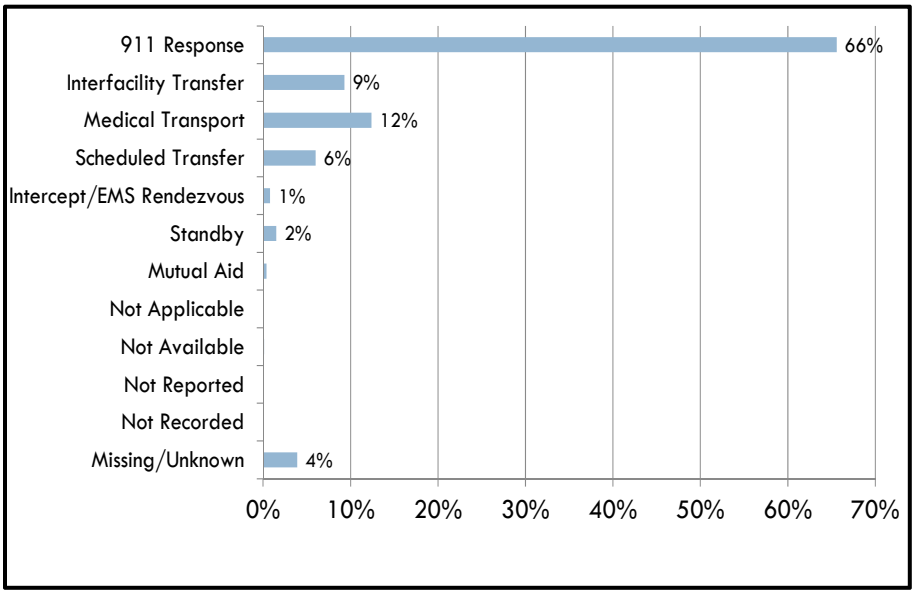
Medical and trauma incidents were nearly even in the number of units that responded to a call.

Figure 10. Median and 90th percentile patient care times in minutes for all EMS runs (911 EMS runs and by ground ambulance only)



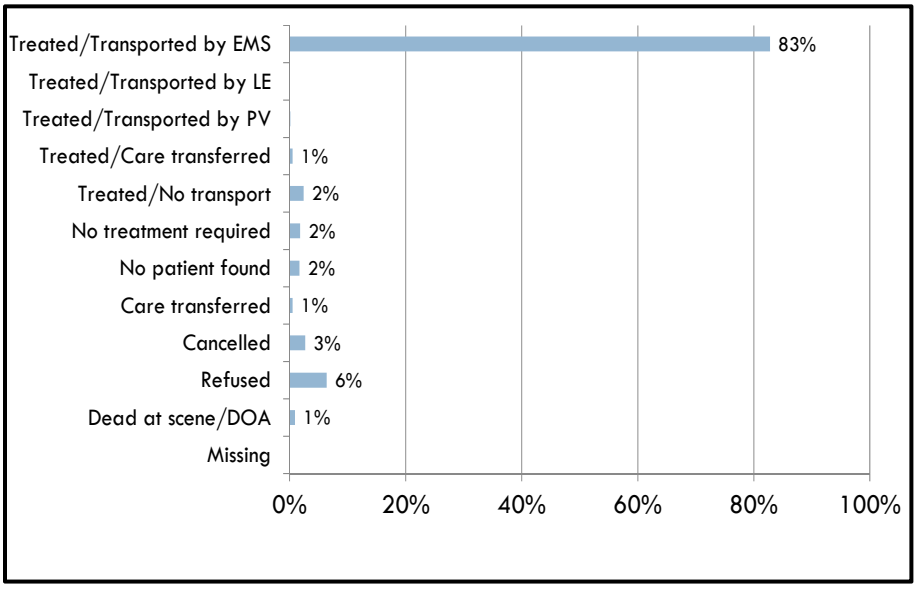
Response and transport median times were lower than scene times, which need improvement. When looking at the 90th percentile times, there was a gradual increase in each time component with transport time at 31 minutes. Distance from incident location to receiving facility may have played a major factor, particularly due to the rural nature of Iowa.

Figure 11. Dispatch type for all EMS runs



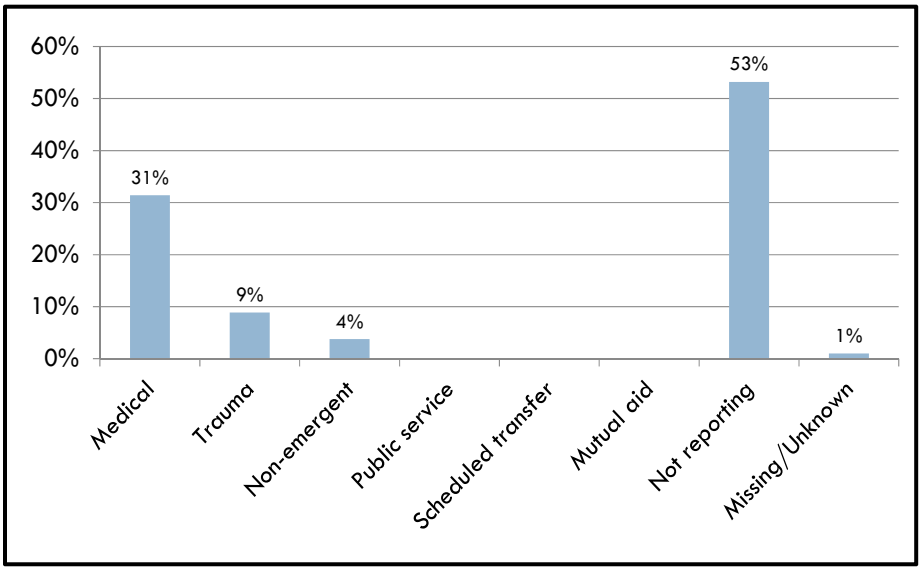
As one might expect, 911 responses were the dominant dispatch type at 66%.

Figure 12. Response outcome for all EMS runs



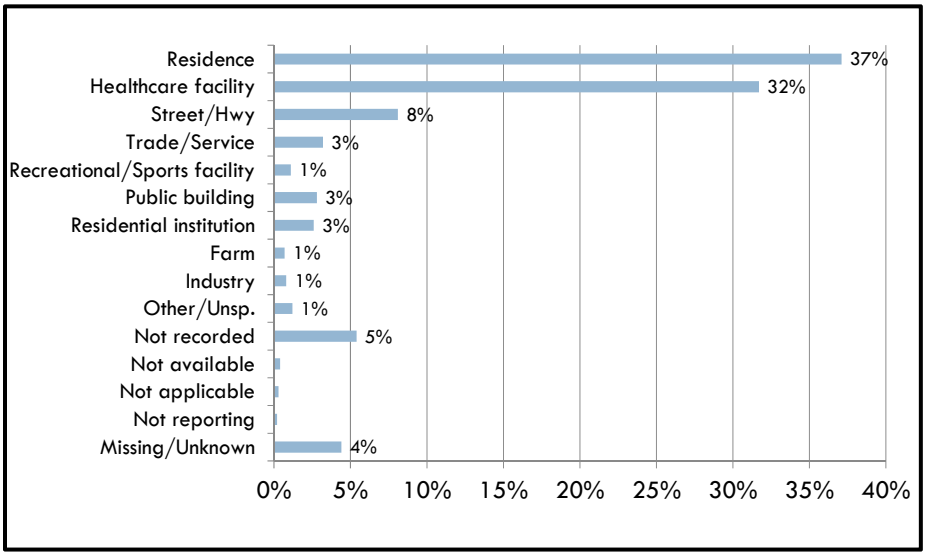
Treated and transported by EMS was the most common response outcome (83%).

Figure 13. Type of incident for all EMS runs



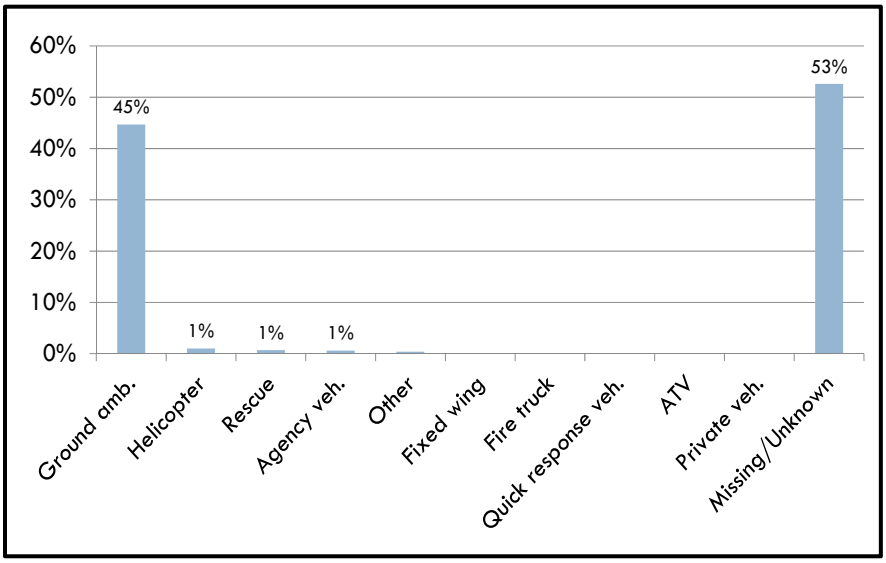
For all agencies reporting an incident type, medical incidents were the leading type (31%).

Figure 14. Type of location where incident occurred (all EMS runs)



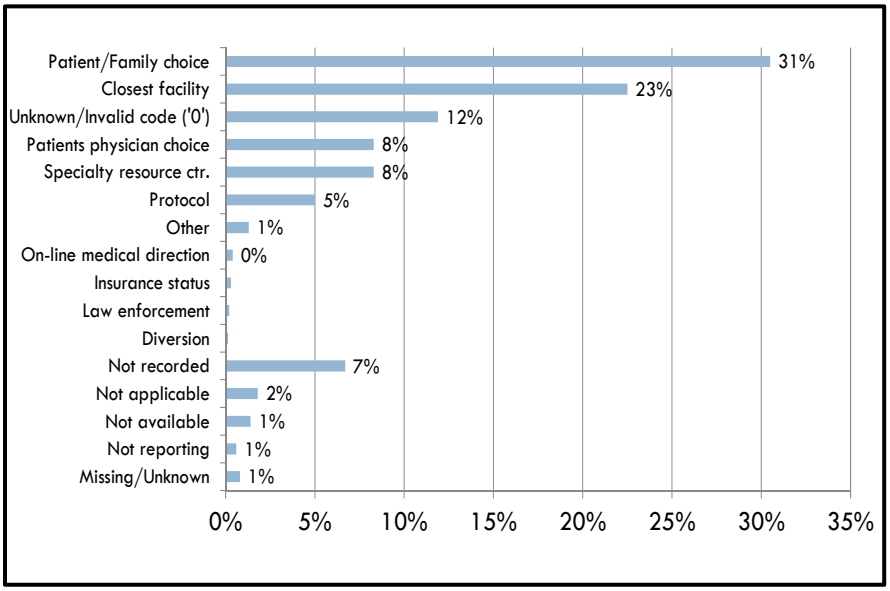
Incidents that occurred at home or at a healthcare (e.g., clinic, hospital, nursing home, mental health facility, etc.) were among the most dominant locations.

Figure 15. Type of vehicle used by EMS providers (all EMS runs)



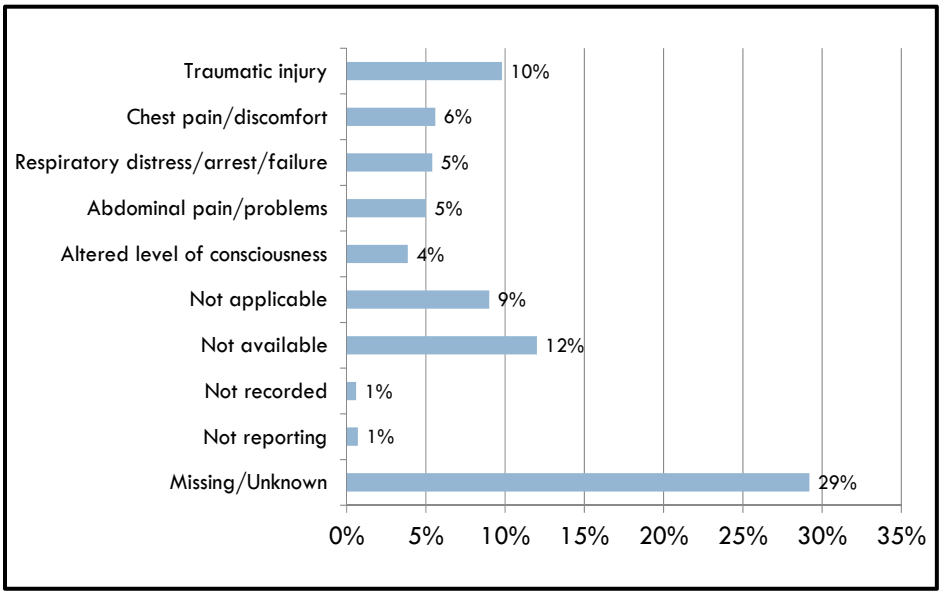
Ground ambulance was the most common vehicle used by EMS providers (45%).

Figure 16. Destination determination by EMS providers (all EMS runs)



Patient/Family choice and closest facility were the top two criteria EMS providers used in determining where patients were taken to.

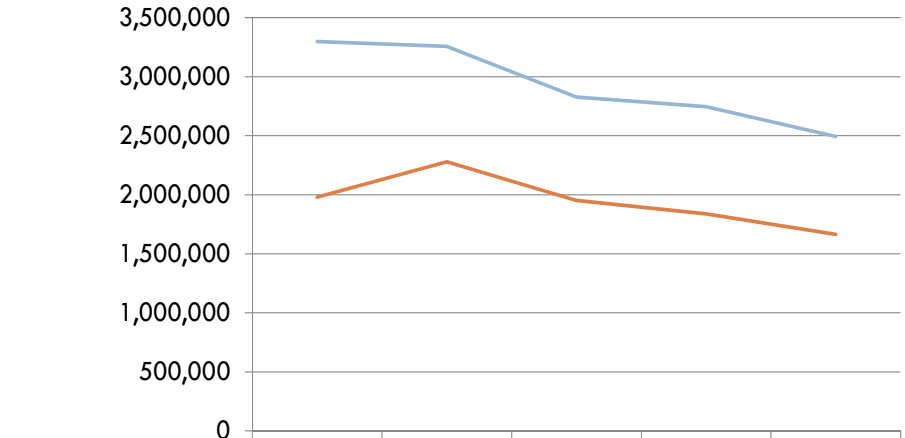
Figure 17. Top five primary provider impressions (including missing/unknown; all EMS runs).



Traumatic injury was the most common primary provider impression.

EMS Budget

Figure 18: Total budget and grant expenditures



	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total Budget	3,298,179	3,256,785	2,828,359	2,746,464	2,493,395
Grants Expenditures	1,979,513	2,279,330	1,951,991	1,837,546	1,664,277

The total budget for fiscal year 2013 is $2,493,395. This is a 24 percent decrease in funding from fiscal year 2009. The percentage of the Bureau of EMS budget dedicated to grant programs varies annually based on the source of funding, trends in specific programs, and consumer participation.

Contact Information

Please feel free to contact Bureau of EMS staff with comments and suggestions. Visit the Bureau website at:

www.idph.state.ia.us/ems

To receive periodic notices and information from the Bureau, send a blank email to:

join-emsbureau@lists.ia.gov

Des Moines Office 1-800-728-3367

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Merrill Meese	Regional Coordinator	Merrill.Meese@idph.iowa.gov	515-244-2793
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Attachment 32

Department of Public Health EMS Budget

FY 14-15 Emergency and Trauma Services

Description of Costs/Description of Funding Source	EMS General Funds-State	EMS PHHS Block Grant-Federal	EMS for Children-Federal	Governor's Traffic Safety Bureau-Federal	Coverdell Grant-Federal	System Development Grants-State and Fees	Love Our Kids-Fees	One time State Funding Allocation	One time Critical Access Trauma Allocation	Budgeted Amount
Program Contractual Costs/Funding Source Timeframe	**July 2014 - June 2015**	**Oct 2014 - Sept 2015**	**Mar 2014 - Feb 2015**	**Oct 2014 - Sept 2015**	**July 2014 - June 2015**	**July 2014 - June 2015**	**July 2014 - June 2015**	**July 2014 - June 2015**	**Sept 2014 - Aug 2015**	
Imagetrend EMS Trauma Data System Maintenance	$ 65,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 65,000
EMS Registry and Trauma Registry-Current Software Maintenance	$ 67,400	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ -	$ 217,400
Trauma Verification Reviews	$ 4,000	$ 23,142	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,150	$ 52,292
Iowa Healthcare Collaborative and University of Iowa (Coverdell)	$ -	$ -	$ -	$ -	$ 298,665	$ -	$ -	$ -	$ -	$ 298,665
System Development Grants	$ -	$ -	$ -	$ -	$ -	$ 765,526	$ -	$ -	$ -	$ 765,526
Love Our Kids Grants	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,470	$ -	$ -	$ 20,470
American College of Surgeons Consultation Visit (total from 13-14	$ -	$ 71,667	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 71,667
Notifications and Investigations	$ 10,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,200
EMS and Trauma End of Year Report	$ 5,375	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,375
Program Management and Administrative Costs/ Total FTE's	**4.55 FTE**	**3.35 FTE**	**0.80 FTE**	**0.55 FTE**	**0.55 FTE**	**0.0 FTE**	**0.0 FTE**	**0.0 FTE**	**0.0 FTE**	**Total 9.8 FTE**
Salary and Fringe	$ 434,079	$ 312,872	$ 86,595	$ 60,000	$ 34,241	$ -	$ -	$ -	$ -	$ 927,787
Travel/Supplies/Equipment/Postage	$ 66,443	$ 1,293	$ 15,668	$ -	$ 5,515	$ -	$ -	$ -	$ -	$ 88,919
IT and Communications	$ 14,168	$ 651	$ 1,217	$ -	$ 600	$ -	$ -	$ -	$ -	$ 16,636
Indirect and Administrative Costs	$ 1,920	$ 1,365	$ 26,520	$ -	$ 10,979	$ 2,000	$ -	$ -	$ -	$ 42,784
Totals	**$ 668,585**	**$ 410,990**	**$ 130,000**	**$ 60,000**	**$ 350,000**	**$ 767,526**	**$ 20,470**	**$ 150,000**	**$ 25,150**	**$ 2,582,721**

Attachment 33

January 2015 EMSAC Minutes

EMERGENCY MEDICAL SERVICES ADVISORY COUNCIL

Minutes January 14, 2015

Ankeny Fire Station #1

Members Present:

Last	First	Representing
Adams, RN	Janis	Iowa Nurse's Association
Butler	Jenny	Iowa Academy of Family Physicians
Frederiksen	Linda	Iowa EMS Association-Private Service
Fuehring	Cherri	EMS Education Committee
Griffin	Jason	Volunteer EMS Provider – At-Large
Kumagai, DO	Amy	Iowa Osteopathic Medical Association
McCurdy	Mark	Iowa Firefighter Association
Messerole	Jeff	Iowa EMS Association
Patterson, PA-C	Tina	Iowa Physician Assistant Society
Pille, MD	Marianka	American Academy of Pediatrics, Iowa Chapter
Robinson	Jamey	Iowa State Association of Counties
Smith	Traci	Volunteer EMS Provider – At-Large
Stilley, MD	Joshua	American College of Emergency Physicians, Iowa Chapter
Willwerth	Daphne	Iowa Hospital Association

Members Absent:

Last	First	Representing
Benzoni. MD	Thomas	Iowa Medical Society
Buresh, MD	Christopher	University of Iowa Hospitals and Clinics
Fleshner	Tammy	Iowa EMS Association – Volunteer Provider
Hagen	Ellen	Iowa Firefighter Association
Justice	Janeen	Iowa Professional Firefighters

Guests:

Kerrie Hull, Paul Arens, Julie Mertens, Chris Perrin, Dennis Cochran, Cindy Small, Brian Helland, Cheryl Blazek, Rosemary Adam, Christopher Metsgar, Gary Merrill, Frank Prowant

IDPH staff present:

Katrina Altenhofen, Steve Mercer, Rebecca Curtiss, Joe Ferrell, Linda Pike, Merrill Meese, Ken Sharp, Evelyn Wolfe, Ellen Woods, Kari Catron, Diane Williams, Michelle Fischer

I. CALL TO ORDER

A. Jeff Messerole called the meeting to order.
B. He addressed the loss of Dr. Butzier and the need to elect a new Vice-Chair.
   i. Dr. Josh Stilley was nominated by Linda Frederiksen and was approved unanimously.
C. Minutes of the July 09, 2014 were approved.
D. Rebecca Curtiss introduced members of the Bureau of Emergency and Trauma Services.

II. OLD BUSINESS

A. No old business discussed

III. NEW BUSINESS ACTION ITEMS

A. Automatic Transport Ventilators
    i. Joe Ferrell presented what QASP Subcommittee sent to EMSAC for approval.
        1. There was discussion regarding CPAP verbiage in the document. Joe will take discussion items back to QASP to have them look at changes and will bring back for approval.
B. Selective Spinal Immobilization Protocol
    i. Dr. Stilley discussed what QASP had decided regarding the long board verbiage.
    ii. The protocol will be presented to TSAC
    iii. Protocol was unanimously approved

IV. **DISCUSSIONS/PRESENTATIONS**

A. State Highway Safety Plan/Zero Fatalities Initiative
    i. This will be held until next meeting.
B. Recognition of EMS Personnel Licensure Interstate Compact (REPLICA)
    i. An overview of REPLICA was presented to the committee.
    ii. The compact will not be in effect until 10 state pass the legislation
    iii. Presentation attached
C. Mental Health Transports
    i. After discussion more information will be gathered and revisited.

V. REPORTS

A. Quality Assurance Standards and Protocols
    i. Crush injury protocol was questioned whether should be separate or is in another protocol
    ii. QASP intends to take on one protocol every quarter.
    iii. Gave an overview of Melissa Bahr's presentation on RESQGARD ITD.
B. System Standards Subcommittee
    i. Kerrie Hull reported on the System Standards Subcommittee
    ii. The subcommittee met on 1-7-2015 to discuss continuing strategies to elevate system standards.
    iii. They are providing technical assistance at local meetings 2 meetings in each of 4 regions – would like to implement in each county.
    iv. Next meeting 3-12-2015
C. Trauma System Advisory Council
    i. 02-02-2015 visit of the American College of Surgeons.
    ii. Updating new trauma software
    iii. BETS new Trauma Coordinator was introduced – Michelle Fischer.
D. EMS Training Programs
    i. Upcoming programs
        1. 2-10-2015 EMS Instructor Update
        2. 02-17-2015 Evaluator
        3. 03-11-2015 3rd Annual EMS Instructors Seminar (Art of Teaching)
            a. Tim Wilson from Canada discussing How the Brain Learns.

E. Iowa EMS Association
   i. Linda Frederiksen advised 01-28-2015 CCP/MIH Stakeholders meeting from 2-4 at Sheraton in WDM. 6PM Networking
   ii. 01-29-2015: EMS Day of Health – EMS on the Hill. (see attached flyer)
   iii. 02-21-2015: 2nd Annual Peds Conference at Coralville Holiday Inn.

F. National EMS Issues and EMSC
   i. National Association of EMS Officials (NASEMSO) developing performance standards
   ii. NASEMSO looking into continue competency issues
   iii. Discussed National Ambulance Standards and how states are working with two potentially different standards
   iv. Kari Catron discussed financial funding sources.
   v. Joe discussed certification of providers (see attached)

G. Bureau of Emergency and Trauma Services
   i. Ken Sharp reported on the legislative priorities. He advised that budget request has been made to redirect $200K, which has not been used, out of cervical cancer to assist in possibly hiring a part-time Medical Director and for system development in the Bureau of Emergency and Trauma Services.
   ii. Rebecca update for EMS:
      1. NHTSA Assessment Funds approved through DOT – planning underway for assessment to occur in early spring
      2. System Development Funds – 87% of 2013-2014 funds expended. 84 counties applied for funds 2014-2015 with $615,526 awarded.
      3. Chapter 132 revisions are ongoing.
      4. No additional legislative general funds or fee increase will be requested in the upcoming year.
      5. Image Trend – EMS and Trauma Software
         a. Intend to complete training and initiate use in April unless issues arise.
      6. American Heart Association STEMI project telemetry is ongoing.
      7. Joe Ferrell is working on several education opportunities for services and medical directors. Hope to roll out training on the Department LMS in the next several weeks. Joe will work through QASP and Dr. Stilley on these projects.
   iii. Rebecca update for Trauma:
      1. Many educational courses have been offered throughout the state through the support of the Department newsletter.
      2. American College of Surgeons Trauma Assessment
         a. The contract is in place and the visit will be scheduled on February 2, 2015.
   iv. Rebecca update for preparedness:
      1. Closing out FY 13-14. Reviewing carryover funds for use.
      2. Continuing to encourage EMS participation in preparedness coalitions.

3. Ebola exercise with public health, EMS and hospitals and UIHC 2-13-2015.

VI. ANNOUNCEMENTS AND ADJOURNMENT

A. Meeting was adjourned.
B. Next meeting April 8, 2015 at the Ankeny Fire Station #1
    i. Future meetings: July 8 and October 21

Attachment 34

EMS Provider Count

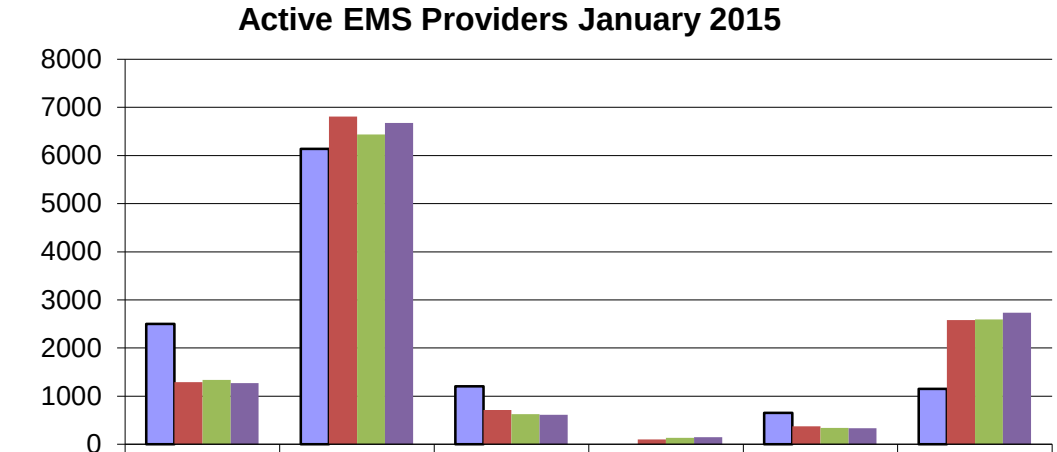
Iowa Department of Public Health
Bureau of Emergency Medical Services

Active EMS Providers

Month/Year	79FR	FR-G	FR	EMR	EMT-A	EMT-D	EMT-B	EMT	EMT-I	AEMT	EMT-P	PS	Para	Total
Jan 2015	16	7	0	1246	1	5	714	5954	612	147	337	416	2115	11770
July 2014	19	7	194	1143	1	5	719	5717	629	133	343	407	2189	11506
Jan 2014	19	7	195	1094	1	7	2308	4502	711	99	372	958	1623	11896
Jan 2013	22	7	901	458	4	9	4831	2057	811	51	421	1878	597	12047
Jan 2002		184	2504		146	220	6135		1203		652	1153		12197

Prior to 2012, 79FR numbers were reported within total FR numbers

Certification at the EMR, EMT, AEMT and Para levels began August 1, 2012



	F/EMR	EMT/B	I	AEMT	P	PS/Para
Jan-02	2504	6135	1203		652	1153
Jan-14	1289	6810	711	99	372	2581
Jul-14	1337	6436	629	133	343	2596
Jan-15	1269	6675	612	147	337	2731

Attachment 35

Regional (Level II) TCF Criteria

Iowa Department of Public Health
Bureau of Emergency Medical Services

Iowa Trauma System Regional (Level II) Hospital and Emergency Care Facility Categorization Criteria

REFERENCE	REQUIREMENTS
Trauma Systems	
(1-1)*	**All trauma care facilities (TCFs) must participate in trauma system planning, development, or operation.**
(2-1)*	**Surgical commitment is essential for a properly functioning TCF.**
(5-1) *	**The hospital has the commitment of the institutional governing body and the medical staff to become a TCF.**
(5-2) *	**There must be a current written resolution (reaffirmed every three years) supporting the TCF from the hospital board.**
(5-3) *	**There must be a current written resolution (reaffirmed every three years) supporting the TCF from the medical staff.**
Descriptions of Trauma Care Facility Levels and Their Roles in a Trauma System	
(2-2) *	**Trauma care facilities must be able to provide on their campus the necessary human and physical resources to properly administer acute care consistent with their level of verification.**
(2-6) *	**The PIPS program must define the conditions requiring the attending surgeon's immediate hospital presence.**
(2-7) *	**With adequate notification from the field the trauma Surgeon is expected to be in the emergency department on patient arrival. The maximum acceptable time is 15 minutes for trauma care facilities. The program must demonstrate that the surgeon's presence is in compliance at least 80% of the time.**

"Trauma Care Facility" is referenced as" Trauma Care Center" in the American College of Surgeon's Resources For Optimal Care of the Injured Patient - 2006

REFERENCE	REQUIREMENTS
Descriptions of Trauma Care Facility Levels and Their Roles in a Trauma System	
(2-8) *	**The trauma surgeon on call must be dedicated to the trauma center while on duty.**
(2-9) *	**A published backup call schedule for trauma surgery must be available.**
(2-14) *	**Trauma surgeons must be credentialed for pediatric trauma care by the hospital's credentialing body.**
(2-15) *	**There must be a pediatric emergency department area, a pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma PIPS.**
(2-16) *	**For adult TCFs admitting fewer than 100 injured children younger than 15 years, these above listed resources are desirable. These hospitals must, however, review the care of their injured children through their PIPS**
Prehospital Trauma Care	
(3-1) *	**The TSMD must be involved in the development of the TCF's bypass protocol.**
(3-2) *	**The trauma surgeon must be involved in the decision regarding bypass.**
(3-3) *	**The trauma program must participate in the development and improvement of pre-hospital care protocols and patient safety programs.**
(3-4) *	**The facility must have less than a maximum divert time of 5%.**
(7-8) *	**A representative from the emergency department must participate in the pre-hospital PIPS program.**
Interhospital Transfer	
(4-1) *	**A mechanism for direct physician to physician contact is essential for arranging patient transfers.**
(4-2) *	**The decision to transfer an injured patient to a specialty care facility in an acute situation is based solely on the needs of the patient and not on the requirements of the patient's specific provider network or the patient's ability to pay (i.e. – payment method is not considered).**

REFERENCE	REQUIREMENTS
Hospital Organization and the Trauma Program	
(5-4) *	**The multidisciplinary trauma program continuously evaluates its processes and outcomes to ensure optimal and timely care.**
(5-5) *	**The trauma medical director must be a board-certified surgeon or an ACS Fellow, (usually a general surgeon) with special interest in trauma care.**
(5-6) *	**The trauma medical director must participate in trauma call.**
(5-7) *	**The trauma medical director must be current in Advanced Trauma Life Support.**
(5-8) *	**Membership and active participation in regional or national trauma organizations is essential for the trauma medical director.**
(6-12) *	**The TSMD must accrue and average of 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.**
(5-9) *	**The TSMD must have the authority to correct deficiencies in trauma care and exclude from trauma call the trauma team members who do not meet specified criteria.**
(2-4) *	**Through the trauma PIPS program and hospital policy, the TSMD must have responsibility and authority for determining each general surgeon's ability to participate on the trauma panel based on an annual review.**
(6-1) *	**The TSMD must have the responsibility and authority to ensure compliance with verification requirements for the trauma surgeons on the call panel (board certification, clinical involvement, education and regional or national commitment).**
(16-10) *	**The trauma program must have a TSMD with the authority and administrative support to lead the program.**
(16-11) *	**The TSMD must have sufficient authority to set the qualifications for the trauma service members.**
(16-12) *	**The TSMD must have sufficient authority to recommend changes for the trauma panel based upon performance reviews.**
(5-10) *	**The criteria for a graded activation must be clearly defined by the TCF and continuously evaluated by the performance improvement and patient safety program.**
(6-7) *	**The criteria for the highest level of activation must be clearly defined by the TCF and evaluated by the PIPS program. The six criteria listed, are the minimally acceptable criteria for the highest level of activation by the ACS, and must be included in the criteria for the highest level of activation.**
(5-11) *	**Trauma programs that admit more than 10% of injured patients to nonsurgical services must demonstrate the appropriateness of that practice through the PIPS process.**
(5-12) *	**Seriously injured patients must be admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers.**

REFERENCE	REQUIREMENTS
Hospital Organization and the Trauma Program	
(5-13) *	**Sufficient infrastructure and support to ensure adequate provision of care must be provided for this service.**
(5-17) *	**The trauma program manager must show evidence of educational preparation and clinical experience in the care of injured patients.**
Clinical Functions: General Surgery	
(6-2) *	**Board certification is essential for general surgeons who take trauma call in trauma care facilities.**
(5-20) *	**The core group of trauma surgeons must be defined by the trauma medical director.**
(5-21) *	**The core group of trauma surgeons must take at least 60% of the total trauma call hours each month.**
(5-22) *	**The TSMD must ensure and document dissemination of information and findings from the peer review meetings to the non- core surgeons on the trauma call panel.**
(6-3) *	**The trauma surgeon must have privileges in general surgery.**
(6-8) *	**The trauma surgeon is expected to be present in the operating room for all trauma operations. A mechanism for documenting this presence is essential.**
(6-11) *	**All general surgeons on the trauma team must have successfully completed the ACS ATLS® course at least once.**
(6-13) *	**The trauma surgeons who take trauma call must accrue the documented 16 hours annually or 48 hours in 3 years of trauma-related CME, or may meet this requirement by demonstrating participation in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program.**
Clinical Functions: Emergency Medicine	
(7-1) *	**The emergency department must have a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients.**
(7-3) *	**Occasionally, emergency physicians cover in-house emergencies. These cases and their frequency must be reviewed by the PIPS program to ensure that this does not adversely affect the care of patients in the emergency department.**
(7-4) *	**In institutions in which there are emergency medicine residency training programs, supervision must be provided by an in-house attending emergency physician 24 hours per day.**
(7-5) *	**The roles and responsibilities of the emergency physicians and trauma surgeons are defined, agreed on, and approved by the director of the trauma service.**
(7-6) *	**Board certification is essential for emergency physicians who take trauma call.**

REFERENCE	REQUIREMENTS
Clinical Functions: Emergency Medicine	
(7-7) *	**Emergency physicians on the call panel must be regularly involved in the care of injured patients.**
(7-8) *	**A representative from the emergency department must participate in the pre-hospital PIPS program.**
(7-9) *	**A designated emergency physician must be available to the trauma director for PIPS issues that occur in the emergency department.**
(7-12) *	**The liaison representative from emergency medicine must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME**
(7-13)*	**The emergency physicians who participate on the trauma team must accrue the documented 16 hours annually or 48 hours in 3 years of trauma-related CME, or participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program.**
(7-14)*	**All emergency medicine physicians must have successfully completed the ATLS course at least once.**
(7-15) *	**Physicians who are certified by boards other than emergency medicine who treat trauma patients in the emergency department are required to have current ATLS status.**
Clinical Functions: Neurosurgery	
(8-1) *	**A neurosurgeon must be designated as the liaison to the trauma service.** *Neurotrauma care should be organized and ideally run by a neurosurgeon who is highly experienced and devoted to the neurosurgical care of injured patients. If this surgeon is not the director of the neurosurgery service, a neurological surgeon liaison must be designated.*
(8-2) *	**Neurotrauma care must be promptly and continuously available for severe traumatic brain injury and spinal cord injury and for less severe head or injuries to the spine, when necessary.**
(8-3) *	**The TCF must provide a reliable neurotrauma on-call schedule with formally arranged contingency plans in case the capability of the neurosurgeon, hospital, or system to care for neurotrauma patients is overwhelmed. A published backup call schedule is ideal, but is not essential when the volume of neurotrauma is low (ie - fewer than 25 emergency craniotomy procedures are done within 24 hours of admission per year)**
(8-4) *	**There must be a PIPS review of all neurotrauma patients who are diverted or transferred.**
(8-5) *	**When neurosurgical consultation is requested, an attending neurosurgeon must be promptly available to the hospital's trauma service.**

REFERENCE	REQUIREMENTS
Clinical Functions: Neurosurgery	
(8-9) *	**Board certification is essential for neurosurgeons who take trauma call.**
(8-10) *	**Qualified neurosurgeons should be regularly involved in the care of head - and spinal cord- injured patients and must be credentialed by the hospital with general neurosurgical privileges.**
(8-13) *	**The liaison representative from neurosurgery must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.**
(8-14) *	**The neurosurgeons who take trauma call must have the documented 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME, or, may meet this requirement by demonstrating participation in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS Program.**
Clinical Functions: Orthopaedic Surgery	
(9-1) *	**Physical and occupational therapists and rehabilitation specialists are essential.**
(9-2) *	**Operating rooms must be promptly available to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization and compartment decompression.**
(9-3) *	**A system must be organized so that semi-urgent musculoskeletal trauma cases can be scheduled without undue delay and at not inappropriate hours that might conflict with more urgent surgery or other elective procedures.**
(9-4) *	**All TCFs must have an orthopaedic surgeon who is identified as the liaison to the trauma program.**
(9-6) *	**Orthopaedic team members must have dedicated call at their institution or have an effective backup call system. If the on-call orthopaedic surgeon is unable to respond promptly, a back-up consultant on-call surgeon must be available.**
(9-7) *	**An orthopaedic team member must be promptly available in the trauma resuscitation area when consulted by the surgical trauma team leader for multiply injured patients.**
(9-8) *	**The design of the backup call system is the responsibility of the orthopaedic trauma liaison, but must be approved by the TSMD.**
(9-9) *	**The TCF must provide sufficient resources, including instruments, equipment, and personnel, for modern musculoskeletal trauma care, with readily available operating rooms for musculoskeletal trauma procedures.**
(9-10) *	**The PIPS process must review the appropriateness of the decision to transfer or retain major orthopaedic trauma.**
(9-14) *	**Board certification is essential for orthopaedic surgeons who take trauma call in a Level II trauma care facility.**

REFERENCE	REQUIREMENTS
Clinical Functions: Orthopaedic Surgery	
(9-15) *	**Orthopaedic surgeons must have privileges in general orthopaedic surgery.**
(9-16) *	**The liaison representative from orthopaedic surgery must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.**
(9-17) *	**The orthopedic surgeons who take trauma call must have the documented 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME, or, may meet this requirement by demonstrating participation in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program.**
Pediatric Trauma Care	
(P-1)	**Trauma surgeons credentialed for pediatric trauma care**
(P-2)	**Pediatric resuscitation equipment in designated patient care areas**
(P-3)	**Microsampling**
(P-4)	**Pediatric-specific PI program**
(P-5)	**Pediatric intensive care unit**
Collaborative Clinical Services	
(11-1)*	**Anesthesiology services must be promptly available for emergency operations.**
(11-2) *	**Anesthesiology services must be promptly available for airway problems.**
(11-3) *	**An anesthesiologist liaison to the trauma program must be designated.**
(11-5) *	**When anesthesiology chief residents or CRNAs are used to fulfill availability requirements, the staff anesthesiologist on call must be advised, promptly available at all times, and present for all operations.**
(11-6) *	**The availability of the anesthesia services and the absence of delays in airway control or operations must be documented by the hospital PIPS process.**
(11-7) *	**Anesthesia services must be available 24 hours a day and present for all operations. When local conditions permit, anesthesia providers may take call from outside the hospital.**
(11-8) *	**Without in-house anesthesia services, protocols must be in place to ensure the timely arrival of the anesthesia provider at the bedside at the time of need.**

REFERENCE	REQUIREMENTS
Collaborative Clinical Services	
(11-11) *	**All anesthesiologists taking call must have successfully completed an anesthesiology residency.**
(11-17) *	**If the first operating room is occupied, a mechanism for providing additional staff must be in place to staff a second operating room.**
(11-18) *	**An operating room must be adequately staffed and readily available.**
(11-19) *	**If an on-call team is used, availability of the operating room personnel and timeliness of starting operations must be evaluated by the hospital PIPS process and measures implemented to ensure optimal care.**
(11-20) *	**The operating room must have the essential OR equipment for the patient populations that they serve.**
(11-21) *	**The TCF must have the necessary equipment for craniotomy.**
(11-24) *	**The postanesthesia care unit (PACU) with qualified nurses must be available 24 hours per day to provide care for the patient if needed during the recovery phase.**
(11-25) *	**If the availability of the PACU is met by a team on call from outside the hospital, the availability of the PACU nurses and absences of delays must be documented by the PIPS program.**
(11-26) *	**The PACU must have the necessary equipment to monitor and resuscitate patients, consistent with the process of care designated by the institution and monitored by the PIPS program.**
(11-27) *	**The PIPS program must, at a minimum, address the need for pulse oximetry, end-tidal carbon dioxide detection, arterial pressure monitoring, pulmonary artery catheterization, patient rewarming, and intracranial pressure monitoring.**
(11-28) *	**Radiologists must be promptly available in person or by teleradiology, when requested, for the interpretation of radiographs, performance of complex imaging studies, and interventional procedures**
(11-29) *	**Diagnostic information must be communicated in a written form and in a timely manner.**
(11-30) *	**Critical information that is deemed to immediately affect patient care must be verbally communicated to the trauma team.**
(11-31) *	**The preliminary report should be permanently recorded. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between preliminary and final interpretations.**
(11-32) *	**Changes in interpretation must be monitored through the PIPS program.**
(11-33) *	**At least one radiologist must be appointed as liaison to the trauma program.**

REFERENCE	REQUIREMENTS
Collaborative Clinical Services	
(11-34) *	**Participation in the trauma PIPS program process is essential. At a minimum, radiologists should be involved in protocol development and trend analysis that relate to diagnostic imaging.**
(11-35) *	**The TCF must have policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transportation to and while in the radiology department.**
(11-36) *	**Conventional radiography and CT must be available in all TCFs 24 hours per day.**
(11-37) *	**An in-house radiographer is required.**
(11-39) *	**If the CT technologist responds from outside the hospital, the PIPS program must document the technologist's response time.**
(11-40) *	**Conventional catheter angiography and sonography must be available 24 hours per day.**
(11-45) *	**A surgeon must serve as co-director or director of the ICU and be responsible for setting policies and administration needs related to trauma ICU patients.**
(11-46) *	**The trauma surgeon must remain in charge of directing the care of patients while in the ICU.**
(11-47) *	**Physician coverage of critically ill trauma patients must be promptly available 24 hours per day.**
(11-48) *	**Physicians must be capable of a rapid response to deal with urgent problems as they arise in critically ill trauma patients**
(11-53) *	**The trauma service must retain responsibility for patients and coordinate all therapeutic decisions appropriate for its level.**
(11-54) *	**The trauma surgeon must be kept informed and concur with major therapeutic and management decisions made by the ICU team.**
(11-56) *	**The PIPS program must document that the physician coverage of emergencies in the ICU is available and does not leave the emergency department without appropriate physician coverage.**
(11-58) *	**A qualified nurse must be available 24 hours per day to provide care during the ICU phase.**

REFERENCE	REQUIREMENTS
Collaborative Clinical Services	
(11-59) *	**The patient/nurse ratio must not exceed 2:1 for critically ill patients in the ICU.**
(11-60) *	**The ICU must have the necessary equipment to monitor and resuscitate patients.**
(11-61) *	**Intracranial pressure monitoring equipment must be available.**
(11-64) *	**TCFs must have the following surgical specialists available. (orthopaedic surgery, neurosurgery, thoracic surgery, plastic surgery, obstetric and gynecologic surgery, ophthalmology, otolaryngology, and urology)**
(11-67) *	**Specialists from internal medicine and pulmonary medicine must be available on staff.**
(11-68) *	**Specialty consultation for problems related to internal medicine, pulmonary medicine, cardiology, gastroenterology, and infectious disease must be available.**
(11-70) *	**A respiratory therapist must be available to care for trauma patients 24 hours per day.**
(11-73) *	**The facility must have either dialysis capabilities or a transfer agreement in place.**
(11-74) *	**Nutrition support services must be available.**
(11-75) *	**Laboratory services must be available 24 hours per day for the standard analyses of blood, urine, and other body fluids, including microsampling when appropriate, in all levels of trauma care facilities.**
(11-76) *	**The blood bank must be capable of blood typing and cross matching to meet the needs of injured patients.**
Organized Burn Care (Burn Center)	
(B-1)	**In-house management or transfer**
(B-2)	**Stabilization/treatment guidelines**
Rehabilitation	
(12-1) *	**Rehabilitation services must be available within the hospital's physical facilities or as a freestanding rehabilitation hospital, through a transfer agreement.**
(12-2) *	**Physical therapy must be provided.**
(12-3) *	**Social services must be provided.**
(12-4) *	**Occupational therapy must be provided.**

REFERENCE	REQUIREMENTS
Rehabilitation	
(12-5) *	**Speech therapy must be provided.**
(12-6) *	**Rehabilitation consultation services, occupational therapy, speech therapy, physical therapy, and social services must be available during the acute phase of care (including intensive care).**
Trauma Registry	
(15-1) *	**Trauma registry data must be collected and analyzed by every trauma care facility. The registry is an essential management tool that contains detailed, reliable, and readily accessible information needed to operate a TCF.**
(15-2) *	**The trauma registry data must be submitted to the National Trauma Data Bank (NTDB).**
(15-3) *	**The trauma registry must be used to support the PIPS program.**
(15-4) *	**The trauma registry should be concurrent. At a minimum, 80% of the trauma cases must be entered within 60 days of discharge.**
(15-5) *	**The trauma program must ensure that appropriate measures are in place to meet the confidentiality requirement of the trauma registry data.**
(15-6) *	**There must be strategies for monitoring data validity for the trauma registry.**
Performance Improvement and Patient Safety	
(5-23) *	**There must be a Trauma Program Operational Process Performance Improvement Committee.**
(16-1) *	**TCFs at all levels must demonstrate a clearly defined PIPS program for the trauma population.**
(16-2) *	**The PIPS program must be supported by a reliable method of data collection that consistently obtains valid and objective information necessary to identify opportunities for improvement.**
(16-4) *	**The performance improvement process of analysis must include multidisciplinary review.**
(16-5) *	**The performance improvement process of analysis must occur at regular intervals to meet the needs of the program.**
(16-6) *	**The results of analysis in the performance improvement process (peer review committee) must define corrective strategies.**
(16-7) *	**The results of analysis and the corrective strategies identified in the PI process (peer review committee) must be documented.**
(16-8) *	**The trauma program must be empowered to address issues that involve multiple disciplines.**

REFERENCE	REQUIREMENTS
Performance Improvement and Patient Safety	
(16-9) *	**The trauma program, including trauma PIPS, should be approved by the hospital governing body as part of its commitment to optimal care of injured patients. This commitment must include adequate administrative support and defined lines of authority that ensure comprehensive evaluation of all aspects of trauma care.**
(16-14) *	**The TCF must be able to demonstrate that the trauma patient population can be identified for separate review regardless of the institutional PIPS process. This is usually done through the trauma registry.**
(16-26) *	**When a consistent problem or inappropriate variation is identified, corrective actions must be taken and documented.**
(16-19) *	**There must be a trauma multidisciplinary peer review committee with participation by the trauma medical director or designee and representatives from general surgery, orthopaedic surgery, neurosurgery, emergency medicine, and anesthesia to improve trauma care by reviewing selected deaths, complications, and sentinel events with the objectives of identification of issues and appropriate responses.**
(16-13) *	**Trauma patient care may be evaluated initially by individual specialties within their usual departmental PIPS review structures; however, identified problem trends must undergo multidisciplinary peer review by the Trauma Peer Review Committee.**
(16-25) *	**All deaths must be systematically reviewed, and categorized as preventable, non-preventable, or potentially preventable through a peer review process.**
(16-20) *	**The attendance by the TSMD and the specialty representatives is at least 50%.**
(16-21) *, (5-10, 6-10) *	**The core general surgeon attendance at the trauma peer review committee is at least 50%.**
(16-22) *	**In circumstances in which attendance is not mandated (non-core members), the TSMD ensures dissemination of information from the trauma peer review committee.**
(16-23) *	**The TSMD must document the dissemination of information from the trauma peer review committee.**
(16-24) *	**Evidence of appropriate participation and acceptable attendance must be documented in the PIPS process.**
(7-10) *	**Emergency physicians must participate actively with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee.**
(7-11) *	**The emergency medicine representative or designee to the multi-disciplinary peer review committee must attend a minimum of 50% of these meetings.**
(8-11) *	**The neurosurgery service must participate actively with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee.**

REFERENCE	REQUIREMENTS
Performance Improvement and Patient Safety	
(8-12) *	**The neurosurgery representative to the multidisciplinary peer review committee must attend a minimum of 50% of these meetings.**
(9-13) *	**The orthopaedic representative to the trauma PIPS program must attend a minimum of 50% of the multidisciplinary peer review meetings.**
(11-13) *	**The anesthesia representative must participate in the trauma PIPS program.**
(11-14) *	**The anesthesiology representative to the trauma program must attend at least 50% of the multidisciplinary peer review meetings.**
(16-15) *	**There must be a process to address trauma program operational issues.**
(16-16) *	**Documentation (minutes) must reflect the review of operational issues and, when appropriate, the analysis and proposed corrective actions.**
(16-17) *	**The process to address trauma program operational issues must identify problems.**
(16-18) *	**The process to address trauma program operational issues must demonstrate problem resolutions (loop closure).**
Outreach and Education	
(17-1) *	**All verified TCFs must be engaged in public and professional education.**
(17-2) *	**A TCF also must provide some means of referral and access to TCF resources.**
(17-3) *	**All TCFs must be involved in prevention activities, some of which involve public educational activities.**
(17-6) *	**The hospital must provide a mechanism to offer trauma-related education to nurses involved in trauma care.**
(17-7)*	**All general surgeons and emergency medicine physicians on the trauma team must have successfully completed the ATLS course at least once.**
Prevention	
(18-1) *	**All TCFs, regardless of resources, must participate in injury prevention.**
(18-2) *	**A TCF must be able to demonstrate evidence of a job description and salary support for a prevention coordinator. The trauma care facility must have a prevention coordinator.**
(18-4) *	**The TCF must demonstrate collaboration with or participation in national, regional, or state programs.**
(18-5) *	**TCFs must have a mechanism to identify patients who are problem drinkers.**

REFERENCE	REQUIREMENTS
Disaster Planning and Management	
(20-1) *	**TCFs must meet the disaster-related requirements of the Joint Commission for Accreditation of Healthcare Organizations (JCAHO).**
(20-2) *	**A trauma panel surgeon must participate on the hospital's disaster committee.**
(20-3) *	**Hospital drills that test the individual hospital's disaster plan must be conducted at least every 6 months.**
(20-4) *	**The TCCF must have a hospital disaster plan described in the hospital's policy and procedure manual or equivalent.**
Organ Procurement Activities	
(21-1) *	**The TCF must have an established relationship with a recognized organ procurement organization.**
(21-2) *	**A written policy must be in place for triggering notification of the OPO.**
(21-3) *	**The PIPS process must review the organ donation rate.**
(21-4) *	**It is essential that each TCF have written protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death.**

INTER-TRAUMA CARE FACILITY TRIAGE & TRANSFER PROTOCOL

1. Use of state approved protocol

Resource and Regional: According to 641-135.1 (147A) the "Inter-trauma Care Facility Triage and Transfer Protocol" means written to assist n the decision making, approved by the department and followed by trauma care facility personnel for the transfer of trauma patients to an appropriate trauma care facility.

The "Inter-trauma Care Facility Triage and Transfer Protocol" approved by the department (August 1996) has been incorporated by reference into the administrative rules. According to 641-135.2(147A). This protocol shall be used to assist personnel from trauma care facilities in making decisions for patient triage and transfer to another trauma care facility. This requirement shall not preclude service programs from making emergency revisions when an incident overburdens medical care resources causing unnecessary delay in patient care.

Attachment 36

Area (Level III) TCP Criteria

Iowa Department of Public Health
Bureau of Emergency Medical Services

Iowa Trauma System Area (Level III)
Hospital and Emergency Care Facility Categorization Criteria

REFERENCE	REQUIREMENTS
Trauma Systems	
(1-1)*	**All trauma care facilities must participate in trauma system planning, development, or operation.**
(2-1)*	**Surgical commitment is essential for a properly functioning TCF.**
(5-1) *	**The hospital has the commitment of the institutional governing body and the medical staff to become a TCF.**
(5-2) *	**There must be a current written resolution (reaffirmed every three years) supporting the TCF from the hospital board.**
(5-3) *	**There must be a current written resolution (reaffirmed every three years) supporting the TCF from the medical staff.**
Descriptions of Trauma Care Facility Levels and Their Roles in a Trauma System	
(2-2) *	**Trauma Care Facilities must be able to provide on their campus the necessary human and physical resources to properly administer acute care consistent with their level of verification.**
(2-7) *	**With adequate notification from the field the trauma surgeon is expected to be in the emergency department on patient arrival. The maximum acceptable time is 30 minutes for TCFs. The program must demonstrate that the surgeon's presence is in compliance at least 80% of the time.**
(2-10) *	**The TCF must have continuous general surgical coverage.**
(2-11)*	**Trauma panel surgeons must: a) Respond promptly to activations, b) Remain knowledgeable in trauma care principles, whether treating patients locally or transferring them to a center with more resources, and c) Participate in performance review activities.**
(2-13)*	**Well-defined transfer plans are essential. It is important to have guidelines approved by the TMD and monitored by the PIPS program that define appropriate patients for transfer and retention**

"Trauma Care Facility" is referenced as" Trauma Care Center" in the American College of Surgeon's Resources For Optimal Care of the Injured Patient - 2006

REFERENCE	REQUIREMENTS
Descriptions of Trauma Center Levels and Their Roles in a Trauma System	
(2-14) *	**Trauma surgeons must be credentialed for pediatric trauma care by the hospital's credentialing body.**
(2-15) *	**There must be a pediatric emergency department area, a pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma PIPS.**
(2-16) *	**For adult TCFs admitting fewer than 100 injured children younger than 15 years, these above listed resources are desirable. These hospitals must, however, review the care of their injured children through their PIPS**
Prehospital Trauma Care	
(3-1) *	**The TSMD must be involved in the development of the TCF's bypass protocol.**
(3-2) *	**The trauma surgeon must be involved in the decision regarding bypass.**
(3-3) *	**The trauma program must participate in the development and improvement of pre-hospital care protocols and patient safety programs.**
(3-4) *	**The TCF must have less than a maximum divert time of 5%.**
(7-8) *	**A representative from the emergency department must participate in the prehospital PIPS program.**
Interhospital Transfer	
(4-1) *	**A mechanism for direct physician to physician contact is essential for arranging patient transfers.**
(4-2) *	**The decision to transfer an injured patient to a specialty care facility in an acute situation is based solely on the needs of the patient and not on the requirements of the patient's specific provider network or the patient's ability to pay (i.e. – payment method is not considered).**
Hospital Organization and the Trauma Program	
(5-4) *	**The multidisciplinary trauma program continuously evaluates its processes and outcomes to ensure optimal and timely care.**
(5-5) *	**The TSMD must be a board-certified surgeon or an ACS Fellow, with special interest in trauma care.**
(5-6) *	**The trauma medical director must participate in trauma call.**
(5-7) *	**The TSMD must be current in Advanced Trauma Life Support.**
(5-9) *	**The TSMD must have the authority to correct deficiencies in trauma care and exclude from trauma call the trauma team members who do not meet specified criteria.**
(2-4) *	**Through the trauma PIPS program and hospital policy, the TSMD must have responsibility and authority for determining each general surgeon's ability to participate on the trauma panel based on an annual review.**

REFERENCE	REQUIREMENTS
Hospital Organization and the Trauma Program	
(6-1) *	**The TSMD must have the responsibility and authority to ensure compliance with verification requirements for the trauma surgeons on the call panel (board certification, clinical involvement, education and regional or national commitment).**
(16-10) *	**The trauma program must have a TSMD with the authority and administrative support to lead the program.**
(16-11) *	**The TSMD must have sufficient authority to set the qualifications for the trauma service members.**
(16-12) *	**The TSMD must have sufficient authority to recommend changes for the trauma panel based upon performance reviews.**
(5-10) *	**The criteria for a graded activation must be clearly defined by the TFC and continuously evaluated by the performance improvement and patient safety program.**
(6-7) *	**The criteria for the highest level of activation must be clearly defined by the TCF and evaluated by the PIPS program. The six criteria listed, are the minimally acceptable criteria for the highest level of activation by the ACS, and must be included in the criteria for the highest level of activation.**
(5-11) *	**Trauma programs that admit more than 10% of injured patients to nonsurgical services must demonstrate the appropriateness of that practice through the PIPS process.**
(5-15) *	**Injured patients may be admitted to individual surgeons, but the structure of the program must allow the TSMD to have oversight authority for the care of these injured patients.**
Clinical Functions: General Surgery	
(5-16) *	**There must be a method to identify the injured patients, monitor the provision of health care services, make periodic rounds, and hold formal and informal discussions with individual practitioners.**
(5-20) *	**The core group of trauma surgeons must be defined by the TSMD.**
(5-21) *	**The core group of trauma surgeons must take at least 60% of the total trauma call hours each month.**
(5-22) *	**The TSMD must ensure and document dissemination of information and findings from the peer review meetings to the non- core surgeons on the trauma call panel.**
(6-3) *	**The trauma surgeon must have privileges in general surgery.**
(6-8) *	**The trauma surgeon is expected to be present in the operating room for all trauma operations. A mechanism for documenting this presence is essential.**
(6-11) *	**All general surgeons on the trauma team must have successfully completed the ACS ATLS® course at least once.**

REFERENCE	REQUIREMENTS
Clinical Functions: Emergency Medicine	
(7-1) *	**The emergency department must have a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients.**
(7-3) *	**Occasionally, emergency physicians cover in-house emergencies. These cases and their frequency must be reviewed by the PIPS program to ensure that this does not adversely affect the care of patients in the emergency department.**
(7-4) *	**In hospitals in which there are emergency medicine residency training programs, supervision must be provided by an in-house attending emergency physician 24 hours per day.**
(7-5) *	**The roles and responsibilities of the emergency physicians and trauma surgeons are defined, agreed on, and approved by the director of the trauma service.**
(7-7) *	**Emergency physicians on the call panel must be regularly involved in the care of injured patients.**
(7-8) *	**A representative from the emergency department must participate in the pre-hospital PIPS program.**
(7-9) *	**A designated emergency physician must be available to the trauma director for PIPS issues that occur in the emergency department.**
(7-14) *	**All emergency medicine physicians must have successfully completed the ATLS course at least once.**
(7-15) *	**Physicians who are certified by boards other than emergency medicine who treat trauma patients in the emergency department are required to have current ATLS status.**
Clinical Functions: Neurosurgery	
(8-6) *	**When there is no neurosurgical coverage, the program must have a plan, approved by the trauma director, that determines for which types and severity of neurological injury patients should remain at the facility.**
(8-7) *	**If the TCF does treat neurotrauma patients, a performance improvement program must convincingly demonstrate appropriate care.**
(8-8) *	**The TCF must have transfer agreements for neurotrauma patients with appropriate Level I and Level II trauma centers.**

REFERENCE	REQUIREMENTS
Clinical Functions: Orthopaedic Surgery	
(9-2) *	**Operating rooms must be promptly available to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization and compartment decompression.**
(9-4) *	**All TCF's must have an orthopaedic surgeon who is identified as the liaison to the trauma program.**
(9-10) *	**The PIPS process must review the appropriateness of the decision to transfer or retain major orthopaedic trauma.**
(9-11) *	**The TCF must have an orthopaedic surgeon on call and promptly available 24 hours a day.**
(9-15) *	**Orthopaedic surgeons must have privileges in general orthopaedic surgery.**
Pediatric Trauma Care	
(P-1)	**Trauma surgeons credentialed for pediatric trauma care**
(P-2)	**Pediatric resuscitation equipment in designated patient care areas**
(P-3)	**Microsampling**
(P-4)	**Pediatric-specific PI program**
(P-5)	**Pediatric intensive care unit**
Collaborative Clinical Services	
(11-1) *	**Anesthesiology services must be promptly available for emergency operations.**
(11-2) *	**Anesthesiology services must be promptly available for airway problems.**
(11-3) *	**An anesthesiologist liaison to the trauma program must be designated.**
(11-6) *	**The availability of the anesthesia services and the absence of delays in airway control or operations must be documented by the hospital PIPS process.**
(11-7) *	**Anesthesia services must be available 24 hours a day and present for all operations. When local conditions permit, anesthesia providers may take call from outside the hospital.**
(11-8) *	**Without in-house anesthesia services, protocols must be in place to ensure the timely arrival of the anesthesia provider at the bedside at the time of need.**
(11-9) *	**Without anesthesia services, there must be documentation of the presence of a physician skilled in emergency airway management.**

REFERENCE	REQUIREMENTS
Collaborative Clinical Services	
(11-10)*	**Operative anesthesia may also be provided by a CRNA under physician supervision. The availability of anesthesia services and the absence of delays in airway control or operations must be documented by the hospital PIPS process.**
(11-12) *	**An anesthesia liaison to the trauma program must be identified.**
(11-18) *	**An operating room must be adequately staffed and readily available.**
(11-19) *	**If an on-call team is used, availability of the operating room personnel and timeliness of starting operations must be evaluated by the hospital PIPS process and measures implemented to ensure optimal care.**
(11-20) *	**The operating room must have the essential OR equipment for the patient populations that they serve.**
(11-22) *	**Craniotomy equipment is required at a TFC that offers neurosurgery services.**
(11-24) *	**The postanesthesia care unit (PACU) with qualified nurses must be available 24 hours per day to provide care for the patient if needed during the recovery phase.**
(11-25) *	**If the availability of the PACU is met by a team on call from outside the hospital, the availability of the PACU nurses and absences of delays must be documented by the PIPS program.**
(11-26) *	**The PACU must have the necessary equipment to monitor and resuscitate patients, consistent with the process of care designated by the hospital and monitored by the PIPS program.**
(11-27) *	**The PIPS program must, at a minimum, address the need for pulse oximetry, end-tidal carbon dioxide detection, arterial pressure monitoring, pulmonary artery catheterization, patient rewarming, and intracranial pressure monitoring.**
(11-28) *	**Radiologists must be promptly available in person or by teleradiology, when requested, for the interpretation of radiographs, performance of complex imaging studies, and interventional procedures**
(11-29) *	**Diagnostic information must be communicated in a written form and in a timely manner.**
(11-30) *	**Critical information that is deemed to immediately affect patient care must be verbally communicated to the trauma team.**
(11-31) *	**The preliminary report should be permanently recorded. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between preliminary and final interpretations.**
(11-32) *	**Changes in interpretation must be monitored through the PIPS program.**

REFERENCE	REQUIREMENTS
Collaborative Clinical Services	
(11-35) *	**The TCF must have policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transportation to and while in the radiology department.**
(11-36) *	**Conventional radiography and CT must be available in all TCFs 24 hours per day.**
(11-39) *	**If the CT technologist responds from outside the hospital, the PIPS program must document the technologist's response time.**
(11-45) *	**A surgeon must serve as co-director or director of the ICU and be responsible for setting policies and administration needs related to trauma ICU patients.**
(11-46) *	**The trauma surgeon must remain in charge of directing the care of patients while in the ICU.**
(11-49) *	**When a critically ill trauma patient is treated locally, there must be a process in place to ensure prompt availability of ICU physician coverage 24 hours per day.**
(11-52) *	**Critical care qualifications of the surgical director or co-director must be a surgeon, who is credentialed by the hospital to care for ICU patients, and who participates in the PIPS process.**
(11-53) *	**The trauma service must retain responsibility for patients and coordinate all therapeutic decisions appropriate for its level.**
(11-54) *	**The trauma surgeon must be kept informed and concur with major therapeutic and management decisions made by the ICU team.**
(11-56) *	**The PIPS program must document that the physician coverage of emergencies in the ICU is available and does not leave the emergency department without appropriate physician coverage.**
(11-57)*	**Most critically ill patients will be transferred to a higher level of care. The PIPS program must review admissions and transfers to ensure their appropriateness.**
(11-58) *	**A qualified nurse must be available 24 hours per day to provide care during the ICU phase.**
(11-59) *	**The patient/nurse ratio must not exceed 2:1 for critically ill patients in the ICU.**

REFERENCE	REQUIREMENTS
Collaborative Clinical Services	
(11-60) *	**The ICU must have the necessary equipment to monitor and resuscitate patients.**
(11-62) *	**If a center admits neurotrauma patients, intracranial pressure monitoring equipment must be available.**
(11-65) *	**Centers must have the availability of orthopaedic surgery.**
(11-69) *	**Internal medicine specialists must be available.**
(11-71) *	**There is a respiratory therapist available and on call 24 hours per day.**
(11-75) *	**Laboratory services must be available 24 hours per day for the standard analyses of blood, urine, and other body fluids, including microsampling when appropriate, in all levels of TCF.**
(11-76) *	**The blood bank must be capable of blood typing and cross matching to meet the needs of injured patients.**
(11-77)*	**The blood bank must have an adequate supply of red blood cells, fresh frozen plasma, platelets, cryoprecipitate, and appropriate coagulation factors to meet the needs of injured patients.**
(11-78)*	**Coagulation studies, blood gases, and microbiology must be available 24 hours per day.**
Organized Burn Care (Burn Center)	
(B-1)	**In-house management or transfer agreement**
(B-2)	**Stabilization/treatment guidelines**
Rehabilitation	
(12-2) *	**Physical therapy must be provided.**
(12-3) *	**Social services must be provided.**

REFERENCE	REQUIREMENTS
Trauma Registry	
(15-1) *	**Trauma registry data must be collected and analyzed by every TDF. The registry is an essential management tool that contains detailed, reliable, and readily accessible information needed to operate a TCF.** .
(15-2) *	**The trauma registry data must be submitted to the National Trauma Data Bank (NTDB).**
(15-3) *	**The trauma registry must be used to support the PIPS program.**
(15-4) *	**The trauma registry should be concurrent. At a minimum, 80% of the trauma cases must be entered within 60 days of discharge.**
(15-5) *	**The trauma program must ensure that appropriate measures are in place to meet the confidentiality requirement of the trauma registry data.**
(15-6) *	**There must be strategies for monitoring data validity for the trauma registry.**
Performance Improvement and Patient Safety	
(5-23) *	**There must be a Trauma Program Operational Process Performance Improvement Committee.**
(16-1) *	**TCFs at all levels must demonstrate a clearly defined PIPS program for the trauma population.**
(16-2) *	**The PIPS program must be supported by a reliable method of data collection that consistently obtains valid and objective information necessary to identify opportunities for improvement.**
(16-4) *	**The performance improvement process of analysis must include multidisciplinary review.**
(16-5) *	**The performance improvement process of analysis must occur at regular intervals to meet the needs of the program.**
(16-6) *	**The results of analysis in the performance improvement process (peer review committee) must define corrective strategies.**
(16-7) *	**The results of analysis and the corrective strategies identified in the PI process (peer review committee) must be documented.**
(16-8) *	**The trauma program must be empowered to address issues that involve multiple disciplines.**
(16-9) *	**The trauma program, including trauma PIPS, should be approved by the hospital governing body as part of its commitment to optimal care of injured patients. This commitment must include adequate administrative support and defined lines of authority that ensure comprehensive evaluation of all aspects of trauma care.**
(16-14) *	**The TCF must be able to demonstrate that the trauma patient population can be identified for separate review regardless of the hospital PIPS process. This is usually done through the trauma registry.**

REFERENCE	REQUIREMENTS
Performance Improvement and Patient Safety	
(16-26) *	**When a consistent problem or inappropriate variation is identified, corrective actions must be taken and documented.**
(16-27)*	**The performance improvement program must be consistently functional, with structure and process.**
(16-19) *	**There must be a trauma multidisciplinary peer review committee with participation by the trauma medical director or designee and representatives from general surgery, orthopaedic surgery, neurosurgery, emergency medicine, and anesthesia to improve trauma care by reviewing selected deaths, complications, and sentinel events with the objectives of identification of issues and appropriate responses.**
(16-13) *	**Trauma patient care may be evaluated initially by individual specialties within their usual departmental PIPS review structures; however, identified problem trends must undergo multidisciplinary peer review by the Trauma Peer Review Committee.**
(16-25) *	**All deaths must be systematically reviewed, and categorized as preventable, non-preventable, or potentially preventable through a peer review process.**
(16-20) *	**The attendance by the TSMD and the specialty representatives is at least 50%.**
(16-21) *, (5-10, 6-10) *	**The core general surgeon attendance at the trauma peer review committee is at least 50%.**
(16-22) *	**In circumstances in which attendance is not mandated (non-core members), the TSMD ensures dissemination of information from the trauma peer review committee.**
(16-23) *	**The TSMD must document the dissemination of information from the trauma peer review committee.**
(16-24) *	**Evidence of appropriate participation and acceptable attendance must be documented in the PIPS process.**
(7-10) *	**Emergency physicians must participate actively with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee.**
(7-11) *	**The emergency medicine representative or designee to the multi-disciplinary peer review committee must attend a minimum of 50% of these meetings.**
(9-12) *	**The orthopaedic service must participate actively with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee.**
(9-13) *	**The orthopaedic representative to the trauma PIPS program must attend a minimum of 50% of the multidisciplinary peer review meetings.**
(11-13) *	**The anesthesia representative must participate in the trauma PIPS program.**

REFERNECE	REQUIREMENTS
Performance Improvement and Patient Safety	
(11-14) *	**The anesthesiology representative to the trauma program must attend at least 50% of the multidisciplinary peer review meetings.**
(16-15) *	**There must be a process to address trauma program operational issues.**
(16-16) *	**Documentation (minutes) must reflect the review of operational issues and, when appropriate, the analysis and proposed corrective actions.**
(16-17) *	**The process to address trauma program operational issues must identify problems.**
(16-18) *	**The process to address trauma program operational issues must demonstrate problem resolutions (loop closure).**
Outreach, Education and Prevention	
(17-1) *	**All verified TCFs must be engaged in public and professional education.**
(17-3) *	**All TCFs must be involved in prevention activities, some of which involve public educational activities.**
(17-6) *	**The hospital must provide a mechanism to offer trauma-related education to nurses involved in trauma care.**
(17-7)*	**All general surgeons and emergency medicine physicians on the trauma team must have successfully completed the ATLS course at least once.**
Prevention	
(18-1) *	**All TCFs, regardless of resources, must participate in injury prevention.**
Disaster Planning and Management	
(20-1) *	**TCFs must meet the disaster-related requirements of the Joint Commission for Accreditation of Healthcare Organizations (JCAHO).**
(20-2) *	**A trauma panel surgeon must participate on the hospital's disaster committee.**
(20-3) *	**Hospital drills that test the individual hospital's disaster plan must be conducted at least every 6 months.**
(20-4) *	**The TCF must have a hospital disaster plan described in the hospital's policy and procedure manual or equivalent.**

REFERNECE	REQUIREMENTS
Organ Procurement Activities	
(21-1) *	**The TCF must have an established relationship with a recognized organ procurement organization.**
(21-2) *	**A written policy must be in place for triggering notification of the OPO.**
(21-3) *	**The PIPS process must review the organ donation rate.**
(21-4) *	**It is essential that each TCF (Levels I, II, and II) have written protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death.**

INTER-TRAUMA CARE FACILITY TRIAGE & TRANSFER PROTOCOL

1. Use of state approved protocol

Resource and Regional: According to 641-135.1 (147A) the "Inter-Trauma Care Facility Triage and Transfer Protocol" means written to assist n the decision making, approved by the department and followed by trauma care facility personnel for the transfer of trauma patients to an appropriate trauma care facility.

The "Inter-Trauma Care Facility Triage and Transfer Protocol" approved by the department (August 1996) has been incorporated by reference into the administrative rules. According to 641-135.2(147A). This protocol shall be used to assist personnel from trauma care facilities in making decisions for patient triage and transfer to another trauma care facility. This requirement shall not preclude service programs from making emergency revisions when an incident overburdens medical care resources causing unnecessary delay in patient care.

Attachment 37

Community (Level IV) TCF Criteria

Iowa Department of Public Health
Bureau of Emergency Medical Services

Iowa Trauma System Community (Level IV)
Hospital and Emergency Care Facility Categorization Criteria (2013)

Criteria	Requirements	Interpretive Guidelines
GENERAL STANDARDS		
1. Trauma care facility commitment	E	1a, b. There must be a current (reaffirmed every three years) written documentation of dedicated financial, physical, human resources, community outreach activities, and educational activities (not limited to Trauma Nurse Core Course (TNCC), Advanced Trauma Life Support (ATLS), and/or Rural Trauma Team Development Course (RTTDC)). The preferred commitment documentation should be in letterform, dated, and signed by, at a minimum, a. CEO and Board president b. Medical Staff President, Chief Nursing Officer, Trauma Nurse Coordinator (TNC), Trauma Program Manager (TPM), Trauma Medical Director (TSMD), ED Medical Director (EDMD). c. Commitment to State trauma and EMS activities; for example, Iowa Trauma Coordinators, Iowa Chapter American College of Surgeons (ACS) Committee on Trauma Committee on Trauma (ACS), Iowa Chapter of American College Emergency Physicians (ACEP), Iowa Emergency Medical Service Association (IEMSA), Trauma System Advisory Council (TSAC), ~~System Evaluation Quality Improvement Committee (SEQIC)~~, Emergency Medical Service Advisory Council (EMSAC).
a. Current written resolution supporting the Trauma Care Facility (TCF) from the hospital board and administration.	E	
b. Current written resolution supporting the TCF from the medical and nursing staff.	E	
c. Commitment to State trauma committees.	E	

E-Essential
D-Desirable
*-If routinely available

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
INSTITUTIONAL ORGANIZATION		
1. Trauma program (TP) a. Official organizational chart b. Administrative structure c. Ensures optimal and timely care	E E E E	a, b. Trauma program that includes an administrator, medical director, trauma program manager/coordinator, and trauma Performance Improvement Patient Safety (PIPS) committees. The trauma program's location in the organizational structure of the facility shall be equal in authority and interaction with other departments and or service lines providing patient care. The trauma program shall involve multiple disciplines that transcend departmental hierarchies across the continuum of care. All of this should be shown on an official trauma program/service organizational chart that demonstrates the administrative and medical staff relationships of the TSMD, the TPM/Coordinator, and the trauma PIPS committees. The administration, physicians, nurses and support personnel, with aid of guidelines, protocols, policies, transfer agreements and a trauma performance improvement program shall make a commitment to assess, stabilize, and transfer patients to an appropriate level TCF when necessary. c. To ensure optimal and timely care a multidisciplinary trauma program must continuously evaluate its processes and outcomes.
2. Trauma service (TS)	-	
3. Trauma team a. Trauma team activation policy	E E	The composition of the trauma team in a community (Level IV) TCF is to be decided upon by the individual TCF, but should be led by a physician who is caring for trauma patients in the emergency department. TCFs shall have a Trauma Team Activation Protocol/Policy that 1) lists all team members, 2) defines response requirements for all team members when a trauma patient is en route or has arrived at the TCF, 3) establishes/identifies the criteria, based on patient severity of injury, for

Criteria	Requirements	Interpretive Guidelines
		activation of the trauma team, and 4) identifies the person(s) authorized to activate the trauma team. Time critical injuries have been identified in the Out of Hospital Trauma Triage Destination Decision Protocol (OOHTTDDP) (Step #1 and Step #2) ~~and the Inter-Trauma Care Facility Triage and Transfer Protocol~~. The types of conditions and injuries listed in the physiologic and anatomic sections of this protocol require a trauma alert/activation. Changes in these criteria must be supported by documentation from the trauma PIPS program.
	E	**T**he trauma team activation policy shall include both physiologic and anatomic clinical indicators for when the physician covering the ED is expected to meet the patient upon arrival at the ED when given timely notice by EMS.
		When the Emergency Department is staffed by non-physician medical provider, the supervising physician must be notified and respond within 30 minutes for the highest level (Level I) trauma team activation.
	E	The size of the trauma team may vary from facility to facility depending upon physician specialty resources, hospital resources, severity of the patient's injuries, and methods of patient transportation to the trauma care facility. A high level trauma team response to a severely injured patient typically includes: 1) general surgeon, if available 2) emergency physician, 3) ED nurses, 4) scribe nurse, 5) OR nurse, 6) lab technician, 7) radiology technologist, 8) ICU nurse, 9) anesthesiologist or CRNA, 10) security officer, and 11) chaplain and or social worker. Facilities may use more than one level of trauma team response based on the variables listed above.
		The minimum criteria for a (major resuscitation) high level trauma team response shall include any of the following: 1) Confirmed blood pressure < 90 at any time in adults and age specific for pediatrics; 2) Respiratory compromise/obstruction and/or intubation;

Criteria	Requirements	Interpretive Guidelines
		3) Penetrating wounds to the head, neck, chest, or abdomen; 4) GCS ≤8 with mechanism attributed to trauma. 5) Emergency physicians discretion
4. Trauma service medical director (TSMD) a. Board certification in their specialty	E	TCFs shall have a physician on staff who functions as the trauma service medical director and whose job description defines his/her role and responsibilities for trauma patient care, trauma team formation, supervision/leadership, and trauma training/continuing education and acts as the medical staff liaison for trauma care with out-of-hospital medical directors, nursing staff, administration, and higher level TCFs. The **TSMD** shall be currently verified in ATLS® and obtain 24 hours of continuing trauma education every 4 years. 8 hours shall be formal and 16 hours may be informal. The TSMD or designee shall also participate in trauma continuing education activities. Through the quality improvement process, the TSMD shall have the overall responsibility for all trauma patients and the administrative authority for the hospital's trauma program. These roles and responsibilities shall be outlined in a formal job description.
5. Trauma Nurse Coordinator/Trauma Coordinator	E	TCF's shall have an individual acting as the trauma coordinator who works in conjunction with the TSMD helping to organize and coordinate the TCF's trauma care response. Ideally this individual should be a RN with emergency/trauma care experience. As an alternative other allied health personnel with clinical experience in emergency/trauma care may fulfill this role. In addition, this position may be shared by individuals with different qualifications in clinical care, quality improvement, and data collection. They shall hold the responsibility for the education of the trauma team in the varied aspects of trauma care within the facility.
	E	The TSMD roles and responsibilities of the TPM/TNC/TC shall be outlined in a formal job description.
a. 16 hours of continuing	E	The TPM/TNC/TC may be a part-time or full-time position depending on the

Criteria	Requirements	Interpretive Guidelines
trauma education: 4 hours formal, 12 hours informal. b. Trauma Program Support Personnel (Trauma registrar, clinical support nurse, secretary, etc.)	E	volume of trauma patients cared for at the TCF. a. Successful completion of trauma nursing course objectives recommended by TSAC and Trauma System Overview. b. The need for trauma program support personnel in a community TCF should be determined by the administration, medical staff and nursing staff. Individuals functioning as the trauma registrar, clinical support nurse, or secretary may be the most helpful individuals. The TPM/TNC/TC may function as the trauma registrar and clinical support nurse if the volume of trauma patients does not require additional personnel. Additional individuals are to be supervised by the TPM/TNC/TC and have a formal job description. Administrative and budgetary support needed for the TPM/TNC/TC depends on the size of the program.
6. Trauma Committees a. Trauma program (system) performance committee	E E	Trauma Care Facilities usually have two committees, the Trauma Multidisciplinary Peer Review Committee and the Multidisciplinary Trauma Program Operational Process Performance (System) Committee. In a community TCF these committee functions may be included in other hospital committees as long as there are separate times delineated for their activities and they are documented separately in the minutes. a. Community TCFs shall have a multidisciplinary trauma performance (system) committee (See trauma committees paragraph above), chaired by the TSMD or his/her designee that assesses (identifies) and corrects trauma program system and service provider issues unrelated to peer review. The committee should work to correct overall program deficiencies and continue to optimize patient care. Committee membership shall include all program-related services. It should meet regularly (usually quarterly or bi-yearly) and take attendance. Minutes that document the issues and any corrections should be developed and provided to the appropriate individuals.

Criteria	Requirements	Interpretive Guidelines
b. Trauma Multidisciplinary Peer Review (PIPS) Committee	E	b. The Trauma Multidisciplinary Peer Review Committee (See trauma committees paragraph above) is a physician committee whose responsibility it is to review trauma morbidity, mortality (selective deaths), and complications including review of the TSMD's cases, discuss sentinel events, and review organizational issues. It is the responsibility of this committee to identify and resolve problems or specific issues regarding trauma care, trigger new policies/protocols and have the representatives from the various departments act as a conduit for information back to their respective departments. All of the committee's functions are considered confidential and should be so labeled. Those individuals that should be involved in this committee's activities are the TSMD, emergency medicine, anesthesia (CRNA), and the TNC/TC or his/her alternate. <u>If a general surgeon is routinely involved in the care of trauma patients then he/she should attend the meetings.</u> All physicians involved in the care of trauma patients should be invited to attend the meetings. There shall be an attendance requirement of ≥ 50% of the total meetings per year for this committee. The committee should meet regularly (minimum quarterly), take attendance, take minutes, and be able to demonstrate how loop closure is accomplished to avoid patient care problems in the future. Loop closure may be demonstrated by the attending physician presence at the peer review session, or through memo, letter or documentation of verbal consultation with the physician. Return communication in by the physician is usually part of the loop closure process. This committee should function under the aegis of the facility's performance improvement program and may meet at the same time as the hospital peer review committee.
HOSPITAL DEPARTMENTS/DIVISIONS		
1. Surgery	*	

Criteria	Requirements	Interpretive Guidelines
2. Neurological surgery a. Neurosurgical trauma liaison	--	
3. Orthopedic surgery a. Orthopedic trauma liaison	--	
4. Emergency medicine	E	Usually one ED physician is the TSMD and he/she needs to follow the interpretive guidelines under the TSMD section above. It is this individual's responsibility to keep all members of the ED medical staff informed about trauma program activities by E-mail, department meeting or other personal communication.
5. Anesthesia	*	*If there is anesthesia services routinely available at a level IV trauma care facility there should be a published anesthesia call schedule. This is important in the management of the difficult airway in the trauma patient.
CLINICAL CAPABILITIES **(Immediately available 24 hours/day in-house)**		
1. General surgery a. Dedicated to a single hospital when on-call	E* D	**<u>*If a general surgeon is routinely involved in the care of a trauma patient, the following shall apply.</u>** *The active involvement of the trauma/general surgeon is crucial to optimal care of the injured patient in all phases of management. The presence of the trauma/general surgeon in the emergency department at the time of arrival of the patient is expected for all high level trauma alert activations when the hospital was given timely notice by out-of-hospital providers as to the expected arrival of the patient. If the hospital is not given timely notice by out-of-hospital providers as to the expected arrival of the patient it is expected that the trauma team respond immediately upon notification of a high level trauma alert. *For all other trauma patients requiring surgical care/consultation the general surgeon shall respond promptly.

Criteria	Requirements	Interpretive Guidelines
		*Local criteria may be established to allow the general surgeon to take call from outside the facility, but with clear commitment on the part of the facility and the surgical staff that the general surgeon will be present in the emergency department at the time of arrival of the trauma patient (high level trauma alert). Compliance with this requirement and applicable criteria must be monitored by the trauma PIPS program. *Qualifications for the trauma/general surgeons caring for trauma patients include; board certification, clinical involvement, education, and state/regional/national commitment. Compliance with these requirements is the responsibility of the trauma service medical director. *Credentialing is required for participation in the trauma program by the trauma/general surgeons
2. Anesthesia	*	If an anesthesiologist or certified nurse anesthetist is on staff then it is appropriate that they have a liaison to the trauma program and attend the trauma committee meetings. They should participate in the peer review process.
3. Emergency medicine a. Physician capable of initial resuscitation who is on-call & immediately available to the ED upon arrival of the trauma patient.	E	Optimally the physician providing initial ED care for trauma patients should be in-house twenty-four hours per day. As an alternative the physician may be on-call and notified to meet the patient upon arrival at the TCF to assume immediate care responsibilities. The presence of the ED physician in the emergency department at the time of arrival of the patient is expected for all high level trauma alert activations when the hospital was given timely notice by out-of-hospital providers as to the expected arrival of the patient. The appropriateness and timeliness of the physician's response to the ED shall be monitored by the TCF's trauma PIPS program.

Criteria	Requirements	Interpretive Guidelines
4. Orthopedic surgery	*	Any specialist involved in the care of trauma patients will need to be involved with all aspects of the trauma program.
On-call and promptly available 24 hours/day		
1. Radiology	E	If teleradiology is utilized, this process shall be monitored and evaluated by the trauma PI program.
2. Laboratory	E	If laboratory is utilized, this process shall be monitored and evaluated by the trauma PIPS program
CLINICAL QUALIFICATIONS		
1. Formal credentialing policy for the trauma program	D	Each trauma care facility should have a formal credentialing policy for general/trauma surgeons (if routinely available), and emergency department physicians participating on the trauma service that establishes trauma-specific credentials that exceed those required for general hospital privileges. The formal credentialing shall policy shall include at a minimum, but not be limited to: 1. Board certification, 2. Physician peer review committee attendance, 3. Trauma program performance committee attendance, 4. ATLS®, 5. Continuing trauma education
1. General/trauma surgeon a. Current board certification (see interpretive guidelines) b. Physician peer review committee attendance > 50% c. Trauma program (system) performance committee attendance d. ATLS® (see interpretive guidelines) e. 24 hours continuing trauma education every 4 years	* E* E* D* E* E*	***If a general surgeon participates routinely in the trauma care of a patient, all criteria in this section shall apply.*** Qualification for trauma care for any general surgeon is board certification, regular participation as trauma team leader in the care of injured patients and attendance at > 50% of the physician peer review committee meetings. The general/trauma surgeon should also attend trauma program (system) performance committee meetings. Trauma/general surgeons shall be currently verified in ATLS® or successfully complete the course within one

Criteria	Requirements	Interpretive Guidelines
1) 8 hours formal 2) 16 hours informal If a physician is providing temporary (locum tenens) coverage, this physician is required to be current in ATLS®.	E	year of joining the trauma service. Board certification in a surgical specialty recognized by the American Board of Medical Specialties, the American Board for Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board is acceptable. Alternate criteria to board certification may be considered. **Alternate Criteria:** the non-board-certified surgeon must have completed an approved surgical residency program, be licensed to practice medicine and approved for surgical privileges by the trauma care facility's credentialing committee. The surgeon must also meet all criteria established by the trauma director to serve on the trauma team and the trauma director must attest to this surgeon's experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the trauma care facility's policy. This individual is expected to meet all other qualifications for members of the trauma team. d. All general surgeons on the trauma team must have successfully completed the ACS ATLS® course at least once. Surgeons who are not boarded in general surgery must be current in ATLS. Refer to 641—137(147A) Trauma Education and Training
2. Emergency medicine a. Current board certification b. Physician (representative) peer review committee attendance > 50% c. Trauma program (system) performance committee attendance d. ATLS® (see interpretive guidelines) e. 24 hours continuing trauma education every 4 years 1) 8 hours formal 2) 16 hours informal If a physician is providing temporary (locum tenens) coverage, this physician is required to be current in	E E E E E	Qualification for trauma care for any emergency physician is board certification, regular participation in the care of injured patients and attendance at > 50% of the physician (representative) peer review committee meetings. The emergency physician should also attend trauma program (system) performance committee meetings. Current ATLS® verification is required for all physicians (as defined by the facilities trauma alert policy) who work in the ED and are boarded in a specialty other than emergency medicine. Board certification in a specialty recognized by the American Board of Medical Specialties, the American Board for Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board is acceptable. Alternate criteria to board certification may be

Criteria	Requirements	Interpretive Guidelines
ATLS®.		considered. **Alternate Criteria**: the non-board-certified emergency physician must have completed an approved residency program, be licensed to practice medicine and approved for emergency medicine privileges by the trauma care facility's credentialing committee. The emergency physician must also meet all criteria established by the trauma director and emergency medicine director to serve on the trauma team. The trauma director and emergency medicine director must attest to this physician's experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the trauma care facility's policy. This individual is expected to meet all other qualifications for members of the trauma team. d. Successful completion and current ATLS® status is an optimal standard for emergency physicians who participate in the initial assessment and resuscitation of injured patients. All emergency medicine physicians must have successfully completed the ATLS® course at least once. Physicians who are certified by boards other than emergency medicine who treat trauma patients in the emergency department are required to have current ATLS® status. Refer to 641—137(147A) Trauma Education and Training
3. Non physician medical provider (ARNP or PA) Licensed or boarded in specialty ATLS® (current certification) 24 hours continuing trauma education every 4 years 1) 8 hours formal 2) 16 hours informal	 E E E	(PA- NCCPA certification) Licensed for ARNP
4. Neurosurgery a. Current board certification b. Physician (representative) peer review committee attendance ≥ 50% c. Trauma program performance committee attendance	-	
5.. Orthopedic Surgery a. Current board certification	*	***If an orthopedic surgeon participates routinely in the trauma care of a patient, all criteria in this section shall apply**.

Criteria	Requirements	Interpretive Guidelines
b. Physician (representative) peer review committee attendance ≥ 50% c. Trauma program performance committee attendance		Qualification for trauma care for any orthopedic surgeon on staff is board certification, regular participation in the care of musculoskeletal injured patients and attendance at ≥ 50% of the physician (representative) peer review committee meetings. The orthopedic surgeon should also attend trauma program (system) performance committee meetings. Board certification in a surgical specialty recognized by the American Board of Medical Specialties, a Canadian Board, or other appropriate foreign board is acceptable. Alternate criteria to board certification may be considered. **Alternate Criteria**: the non-board-certified surgeon must have completed an approved surgical residency program, be licensed to practice medicine and approved for surgical privileges by the trauma care facility's credentialing committee. The surgeon must also meet all criteria established by the trauma director to serve on the trauma team. The trauma director and orthopedic surgeon liaison/director must attest to this surgeon's experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the trauma care facility's policy. This individual is expected to meet all other qualifications for members of the trauma team.
FACILITY RESOURCE CAPABILITIES		
1. Volume Performance a. Presence of surgeon at resuscitation b. Presence of surgeon at operative procedures	 * E	*If a general/trauma surgeon participates routinely in the trauma care of a patient, then he/she will be expected to be present at all high level trauma alert activations.
2. Emergency Department a. Designated physician director	 E	One of the physicians taking ED call, perhaps the chairperson of the ED committee (or similar standing committee responsible for the ED), or ED medical director shall be responsible for 1) physician staffing of the ED, 2) out-of-hospital medical direction, 3) acting as liaison for the ED with nursing staff, and TCF administration, and 4) ensuring that ED physician PI activities are in place and performed. These responsibilities shall be formalized in an ED medical director job description and or in the medical staff bylaws. The ED medical director is usually the TSMD.

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
b. Registered nurses available 24 hours per day	E	Nursing personnel staffing the ED should be physically present in the ED prior to the arrival of the trauma patient to ensure that the room and equipment are available and ready for use. These activities shall be assessed by the trauma PIPS program. Nurses acting in this capacity, as defined by the TCF's trauma alert policy, shall have current trauma training equivalent to the trauma course objectives approved by the department and they shall maintain appropriate CEUs in trauma care. Nurses have one year from the date of the nurse joining the TCF's trauma team to successfully complete the required trauma training. Continuing trauma education (CEUs) are required every four years, to include but not be limited to, 4 hours formal and 12 hours informal. Refer to 641-137(147A)

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
C. Equipment for patients of all ages:		
1. Airway control & ventilation	E	
2. Pulse oximetry	E	
3. Suction devices	E	
4. Electrocardigraph/oscilloscope-defibrillator	E	
5. Internal paddles	--	
6. CVP monitoring equipment	--	
7. Standard IV fluids & administration sets	E	
8. Large-bore intravenous catheters	E	
9. Sterile surgical sets for:		
a) Cricothyrotomy	E	
b) Thoracostomy (chest tube insertion)	E	
c) Central line insertion	D	
d) Thoracotomy	D	
e) Venous cutdown	D	
f) Intraosseous (IO)	E	
g) Thoracotomy	D	17. This means any device that can allow for fluid to be given rapidly such as rapid infuser device, blood pressure bag or similar bag, etc.
10. Arterial catheters	D	
11. Drugs for emergency care	E	
12. X-ray tech. availability 24 hours per day	E	19. On-line medical control (two-way communication) shall be available to all out-of-hospital service programs in the TCF area, with physician and/or physician designees trained in receiving patient reports and giving orders for patient treatment interventions and/or TCF destination decisions. Physician designee means any registered nurse licensed under Iowa Code chapter 152, or any physician assistant licensed under Iowa Code chapter 148C and approved by the board of physician assistant examiners. The physician designee acts as an intermediary for a supervising physician in accordance with written policies and protocols in directing the actions of emergency medical care personnel providing emergency medical services.
13. Spinal immobilization devices	E	
14. Pelvic immobilizer	E	
15. Pediatric resuscitation tape	E	
16. Thermal control equipment		
a) for patient	E	
b) for blood and fluids	E	
17. Rapid infuser system	E	
18. Qualitative end-tidal CO2 determination	E	
19. Communication with EMS	E	
20. Ultrasound	D	
21. Heliport or Landing Zone	E	21. Have a helipad or a written, organized plan for getting the trauma patient to a safe landing zone with alternative sites should something occur with the first choice.

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
3. Operating Room	*	***If a general/trauma surgeon is routinely available and operates on trauma patients at your hospital then the following criteria apply.**
a. Personnel available 24 hours per day	E*	
b. Age-specific equipment	*	*The operating room staff shall be on-call and promptly available when notified to respond. The OR staff is part of the trauma team and shall be notified as part of the trauma alert activation protocol. A call schedule shall be posted. The OR staff's availability and response times shall be part of the trauma PI program. When a general surgeon is available and responds as part of the TCF's trauma alert protocol, operating room staff shall be on-call and promptly available when notified to respond. The OR staff is then part of the trauma team and shall be notified as part of the trauma alert protocol. The OR staff's availability and response times shall be part of the trauma PIPS. 5.* If an orthopedic or surgeon capable of managing orthopedic trauma is routinely available then this equipment is essential 6. *This means any device that can allow for fluid to be given rapidly such as rapid infuser device, blood pressure bag or similar bag, etc.
1. Cardiopulmonary bypass	--	
2. Thermal control equipment		
a). For patient	E*	
b). For fluids and blood	E*	
3. X-ray capability including c-arm image intensifier	D*	
4. Endoscopes, broncoscope	E*	
5. Equipment for long bone and pelvic fixation	E*	
6. Rapid infuser system	E*	
4. Postanesthetic Recovery Room (ICU OK)	E*	*If a general/trauma surgeon is available all of these apply.
a. Registered nurses available 24 hours per day (in-house or on-call)	E*	
b. Equipment for monitoring and resuscitation	E*	
c. Intracranial monitoring equipment	--	
d. Pulse oximetry	E*	
e. Thermal control	E*	
f. CO_2 monitoring	E*	
5. Intensive or Critical Care Unit	D	
a. Registered nurses with trauma education available 24 hours per day	--	
b. Designated surgical director or surgical co-director	D	This function may be performed by a general surgeon/TSMD on the TCF's ICU committee or by the ICU medical director participating on the multidisciplinary physician peer review committee.
c. General/trauma surgeon with privileges in critical care and approved by the TSMD, on-call and promptly available to the ICU	--	

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
d. Equipment for monitoring and resuscitation (in ICU/CCU)		d. This equipment is necessary if there are trauma patients in the ICU.
1). Cardiopulmonary resuscitation cart with defibrillator	--	
2). Electrocardiograph machine	--	
3). Instrument sets for tracheal intubation, tracheostomy, thoracostomy, and central venous puncture	--	
e. Pulmonary artery monitoring equipment	--	
6. Respiratory Therapy Services	D	A call schedule shall be posted and availability and response of the therapist shall be part of the trauma PIPS program.
a. On-call 24 hours per day	D	
7. Radiological Services	E	Radiology technologists shall be on call & promptly available to the ED. The technologist is part of the trauma team and shall be notified as part of the trauma alert activation protocol. A call schedule shall be posted in all areas of the TCF caring for trauma patients. The technician's availability and response shall be monitored as part of the trauma PIPS program.
a. Radiology technologist on-call and available 24 hours per day	E	
b. In-house radiology technologist	D	
c. Angiography	--	
d. Sonography	D	
e. Computed tomography	D	
f. In-house CT technician	--	
g. Magnetic resonance imaging	--	
8. Clinical Laboratory Services (available 24 hours per day)	E	Laboratory personnel shall be on-call and promptly available to the emergency department/ICU. They are part of the trauma team & shall be notified as part of the trauma alert activation protocol. A call schedule shall be posted in all areas of the TCF caring for trauma patients. Laboratory personnel availability and response times shall be part of the trauma PIPS program. There shall be a policy delineating the priority of a trauma patient in the collection and processing of blood and urine for evaluation. TCF's shall be capable of storing blood received from blood banks and providing non-cross matched blood to the ED on patient arrival. TCFs shall have a formal emergency release of blood policy.
a. Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E	
b. Blood typing and cross-matching	E	
c. Coagulation studies	E	
d. Blood bank capability or access to a community central blood bank and adequate storage facilities	E	
e. Blood gases and pH determinations	E	
f. Microbiology	E	

Criteria	Requirements	Interpretive Guidelines
9. Acute Hemodialysis a. In-house or transfer plan/agreement	 E	 One plan/guideline/agreement to cover all transfer trauma patients.
10. Organized Burn Care a. In-house or transfer plan/agreement b. Stabilization/treatment guidelines	 E E	One plan/guideline/agreement to cover all transfer trauma patients. As part of the transfer plan for burn care, the TCF should have a formal agreement with a burn center.
11. Acute Spinal Cord Management a. In-house management or transfer plan/agreement b. Stabilization/treatment guidelines	 E E	One plan/guideline/agreement to cover all transfer trauma patients.
12. Rehabilitation Services 1. In-house or transfer plan/agreement to an approved rehabilitation facility 2. Physical therapy 3. Occupational Therapy 4. Speech therapy 5. Social services 6. Formal policy integrating the trauma and rehabilitation service.	 D D D -- D D	
PERFORMANCE IMPROVEMENT		
Trauma performance improvement and patient safety (PIPS) program	E	Community TCFs shall perform all PIPS activities as required for Resource, Regional and Area TCFs. The overall responsibility of concurrent and retrospective review of the care of trauma patients (PIPS) lies with the TSMD and TPM/TNC in conjunction with the trauma performance improvement (system) committee and the physician multidisciplinary peer review committee and is consistent with medical staff and facility PIPS policies. Some of the activities of the two committees may coincide with each other and require both committees involvement, e.g. trauma related transfers, trauma related bypass/diversions, pre-hospital trauma care, etc. Standard of care and evidenced based data should be utilized. Summaries of the TCF's PIPS activities should be reported regularly to the administration and physician committees as required by the hospital bylaws. The Community (Level IV) PIPS process review may be performed by the two separate committees or higher level TCFs or by an appropriate hospital (system) and

Criteria	Requirements	Interpretive Guidelines
		medical staff peer review committees. This process may also be performed in conjunction with PIPS committee in higher level TCFs. The frequency of committee meetings in community is usually decided by the TMD and TPM/TNC/TC. Due to the fact there are less patients to be reviewed in community TCF, this is usually quarterly or twice a year. It certainly may be more frequent if required. Consideration should be given to offering continuing education credits to all in attendance at the meetings.
1. Multidisciplinary physician peer review committee	E	1. The peer review committee should be chaired by the TSMD or his/her designee and have representatives from all physicians involved in the care of trauma patients. Attendance requirements should be established for all physicians on the committee at least 50% of the meetings. The peer review process and minutes of this committee should be confidential in accordance with facility and medical staff policy and protected from discovery by state law. A statement indicating this should be placed on all PIPS forms to ensure this. A mechanism shall be established by which all physicians caring for trauma patients in the TCF are involved in peer review of the care. Physicians should regularly review and discuss: 1) the results of trauma peer review activities, 2) problematic cases including complications, and 3) all trauma deaths identifying each death as mortality without opportunity for improvement, anticipated mortality with opportunity for improvement, unanticipated mortality with opportunity for improvement. The findings of the peer review process should be communicated by the TSMD to the physician(s) involved in the care of the trauma patient that was reviewed by memo, letter, chart review form, personal contact or by meeting attendance. Communication from the physician in return is expected. Obtaining communication in return is part of the loop closure/resolution process in the trauma PIPS program. Included in this
a. Multidisciplinary physician peer review and documentation of all trauma care including morbidity and mortality at the TCF with documented loop closure	E	
b. Review of times and reasons for trauma related transfers	E	
c. Review of times and reasons for trauma related bypass/diversion based on TCF policy	E	
d. Medical nursing audit	E	
e. Review of pre-hospital trauma care	E	

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
		review should be review of the TSMD's care of patients by one or more of his/her physician peers. Review of pre-hospital patient care helps to improve overall trauma care.
~~f. Work with State Evaluation and Quality Assurance Committee (SEQIC)~~	~~E~~	Working with SEQIC improves the care throughout the state trauma system.
2. In-house trauma registry with participation in: a. State registry b. NTDB	 E D	2. Trauma care facilities shall have a responsible individual or individuals who shall coordinate, direct and complete the collection and reporting of data to the department in accordance with the Iowa Code/Administrative Rules 641—136 (147A). Community TCFs shall utilize a reporting process approved by the department. Utilization of trauma registry data will facilitate the entire PIPS and peer review process. It should include a defined trauma population and a set of indicators/audit filters. Registry input should be accomplished on a regular basis with completion within two months. Each committee meeting should include a trauma registry report. Providing data to the state trauma registry will allow the PIPS program to obtain reports that can be used for benchmarking their program against other programs of their size.
3. Multidisciplinary trauma performance improvement (system) committee a. Periodic review of all trauma system/service policies, procedures and guidelines	E E	3. The multidisciplinary trauma performance (system) committee is chaired by the TSMD or his/her designee. The membership shall include all hospital and medical staff services involved in the care of trauma patients. Each TCF may establish its own format for the committee. The committee is responsible for the assessment and correction of trauma program (service) issues and processes and works to correct any deficiencies in order to improve patient care. It should work closely with the peer review committee to accomplish this goal. The committee meets regularly usually determined by the TMD and TPM/TC. In the community TCF (level IV) this should quarterly or twice a year and frequently meets just prior to the peer review committee. Attendance requirements are established and minutes are recorded. Committee minutes are reported to the peer review committee and appropriate hospital committees.

Criteria	Requirements	Interpretive Guidelines
b. Work with the Trauma System Advisory Council (TSAC)	D	Providing input to the trauma systems advisory committee (TSAC) would be advisable should the community TCF have any concerns, questions, or issues.
CONTINUING EDUCATION (for staff)/OUTREACH		
1. ATLS instructor participation in state programs.	D	Continuing trauma education programs in TCFs must be provided by, but not limited to, the facility in-house or via the ICN, closed circuit TV, computer networks etc. 2a Continuing education for trauma team members: Physicians and non-physician medical providers (ARNP, PA): Eight hours of the required continuing trauma education are to be formal, i.e., standardized educational settings (conferences) with a curriculum. These formal hours may be developed by the host TCF, collaboration with other State TCFs, or a program developed and offered by an out-of-state provider of education. The provider and/or credentialing agency must document attendance in educational trauma topics in order to maintain and enhance knowledge and skills that are centered around the assessment and management of the trauma patient in all age groups. *Highly Recommended Objectives To Meet in Continuing Education Programs: 1) Communication and/or demonstration of the systematic initial assessment and treatment. 2) Within the primary survey, determine and demonstrate airway patency and cervical spine control, breathing and ventilation, circulatory status with hemorrhage control, neurologic status, exposure and environmental control. 3) Discussion and/or demonstration of the management techniques in the resuscitation phase, based on findings from the primary survey. Major skills to maintain include airway and ventilation management, needle and tube
2. Trauma continuing education programs provided for:		
a. Staff/community physicians	E	
b. Nurses	E	
c. Allied health	E	
d. Out-of-hospital personnel	E	
3. Yearly Multidisciplinary Trauma Conference	D	

Criteria	Requirements	Interpretive Guidelines
		thoracostomy, shock resuscitation, neurologic assessment and scoring. 4) Integration of the history of the trauma event, patient's past medical history, and current findings with anticipated injuries. 5) Discussion/outline of the definitive care necessary to stabilize each patient in preparation for possible transport to a trauma center or to the closest appropriate facility. 6) Establishment and discussion of transport plans with other members of the trauma team, based on patient status and resources in that region, including EMS modes of transport and scope of practice. 7) Within the secondary assessment findings, given a radiographic image, identify fractures and associated injuries. Discussion and demonstration of immobilization techniques with subsequent referral if necessary. *these objectives may easily be met within the Advanced Trauma Life Support (ATLS) ® program. Sixteen hours of the required continuing trauma education may be informal, determined and approved by the trauma care facility from any of the following: 1. Multidisciplinary trauma case reviews; 2. Multidisciplinary trauma conferences; 3. Multidisciplinary trauma mortality and morbidity reviews; 4. Multidisciplinary trauma committee meetings; 5. Trauma peer review meetings; 6. Any trauma care facility committee meeting with a focus on trauma care evaluation; and 7. Critical care education such as ACLS, PALS, NRP, APLS (1) or equipment inservices. TCF's at a minimum shall provide for CEU and CEH offerings (internally or

Criteria	Requirements	Interpretive Guidelines
		externally) for nursing, allied health personnel, and EMS providers. Community TCFs are not required to hold trauma conferences. However, attendance at higher level TCF conferences to obtain continuing medical education or nursing credits would be recommended.
PREVENTION		
1. Injury control studies	-	
2. Collaboration with other institutions	D	
3. Monitor progress/effect of prevention programs -	D	
4. Designated prevention coordinator-spokesperson for injury control -	-	
5. Outreach activities	D	
6. Information resources for public	D	
7. Collaboration with existing national, regional, state prevention programs	D	
8. Community prevention activities	D	8. Coordination and/or participation in community prevention activities.
ORGAN PROCUREMENT		
1. Organ procurement policy	E	
TRANSFER AGREEMENTS/PLAN/PROTOCOL		
As a transferring facility	E	Generic agreements, plans or guidelines.
PEDIATRICS		
1. Trauma surgeons credentialed for pediatric trauma care	--	
2. Pediatric emergency department area	--	
3. Pediatric resuscitation equipment immediately available in designated patient care areas	E	
4. Microsampling	--	

Community (Level IV) Trauma Care Facility Categorization and Verification Criteria

Criteria	Requirements	Interpretive Guidelines
5. Pediatric-specific PIPS program	E	5. The pediatric PIPS activity shall include specific indicators/audit filters in the trauma PIPS program.
		Criteria adopted from the American College of Surgeons Committee on Trauma (2006) *Resources for Optimal Care of The Injured Patient.* Chicago, Il: American College of Surgeons. Revised by the Trauma System Advisory Council, Categorization and Verification Subcommittee (Chair-Thomas Foley, M.D., FACS) Reviewed and approved by the Trauma System Advisory Council